TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

FIBERS A

FIBERS IN BRUSHMAKING. Fibres 17: 361-364 (Nov. 1956). (309)

Survey of traditional animal, vegetable, and man-made fibers as filling materials for brushes. Photographs.

CRYSTALLITE REGULARITY AND VOID CONTENT IN CELLULOSE FIBERS AS SHOWN BY SMALL-ANGLE X-RAY SCATTERING. W. O. Statton (E. I. du Pont de Nemours & Co.). J. Polymer Sci. 22: 385-397 (Dec. 1956). (310)

NATURAL FIBERS A 1

SYNONYMS OF COTTON. A. N. Gulati. Indian Cotton Growing Rev. 10: 253-260 (Oct. 1956). (311)

The evolution of the various names for cotton throughout the world is traced, and the synonyms are grouped together on the basis of phonetical affinities. 37 references.

VARIATION OF CERTAIN FIBER PROPERTIES WITH COTTON GROUP-LENGTHS. S. Rajaraman and C. Nanjundayya. Indian Cotton Growing Rev. 10: 236-242 (Oct. 1956). (312)

Tests were made on 13 standard Indian cottons. With increase in fiber length, individual fiber strength increased, fiber weight per unit length progressively decreased, % mature fibers was lower in the shortest group-length, and intrinsic fiber strength and Pressley strength index progressively increased. 8 references.

FRICTIONAL FORCES BETWEEN FRINGES OF FIBERS. K. R. Sen. Reply: E. Lord. (Letters to the editor). J. Textile Inst. 48: T37-T38 (Jan. 1957). (313)

Discussion of the relations between cotton fiber friction, maturity, and fineness.

SPONTANEOUS HEATING AND IGNITION OF WET COTTON BALES. J. Textile Inst. 47: P1024-P1025 (Dec. 1956). (314)

Summary of report by the Joint Fire Research Organization of the Department of Scientific and Industrial Research and Fire Offices' Committee on the fire hazard of wet cotton bales. 2 references.

FILM-LINED BURLAP AIDS COTTON OPENING ROOM PROCEDURES. Joanna Cotton Mills. Am. Textile Reptr. 71: 11-13, 41 (Jan. 10, 1957). (315)

With the new laminated covers, cotton is ginned and compressed in one operation. The film laminated to the burlap prevents clinging of cotton to the cover and gives protection from dirt. No foreign fibers are pulled out of the covering to get mixed with the cotton.

WOOL AND OTHER HAIR FIBERS. J. Menkart and R. Jackendoff. Encyclopedia of Chemical Technology 15: 103-115 (1956). (316)

Fiber growth and morphology, physical properties, chemical composition and properties, and economic aspects. 26 references.

CRIMP: CLASSIFICATION IN MERINO WOOL. J. K. LeRoux and R. H. Burns. J. Textile Inst. 47: P1019-P1023 (Dec. 1956). (317)

The object of this work was to establish clearly defined Merino crimp types by visual means which would check objectively. Crimp was classified by visual characters into 5 types. 8 references.

PLASTICITY OF WOOL. PART 3. PHYSICAL AND CHEMICAL CAUSES OF VARIATION. P. L. le Roux and J. B. Speakman (Leeds Univ.). Textile Research J. 27: 1-7 (Jan. 1957). (318)

Variations in plasticity among fibers of a single staple of wool are associated with variations in swelling in water and in 100% formic acid. Such differences are dependent on the relative proportions of amorphous and crystalline material in the fibers. Good quality wools have the highest plasticity. Since there is no necessary connection between plasticity and fineness, wool quality cannot be defined in terms of dimensional characteristics alone. 9 references.

OBSERVATIONS RELATING TO CORTICAL ASYMMETRY IN WOOL. A. R. Haly (Wool Textile Res. Labs., Australia). (Letter to the editor). Textile Research J. 27: 82-84 (Jan. 1957). (319)

SUPERCONTRACTION OF WOOL IN LITHIUM BROMIDE SOLUTION. J. Griffith and A. E. Alexander. (Letter to the editor). Chemistry & Industry No. 47: 1424-1425 (Dec. 1, 1956). (320)

Variability in supercontraction of wool fibers in lithium bromide was found to be due to the presence of minute traces of bromine. 5 references.

WOOL GREASE. J. T. Scanlan. Encyclopedia of Chemical Technology 15: 119-135 (1956). (321)

A survey, covering history, physical properties, chemical composition, methods of recovery, economic aspects, applications, lanolin derivatives, and constituents. 78 references.

ASBESTOS: FROM ROCK TO FABRIC. C. Z. Carroll-Porczynski. Textile Institute, 10 Blackfriars Street, Manchester 3, England, 1956. 400 p. $7.75. (322)

Comprehensive survey of the properties, processing, and textile and industrial applications of asbestos. Extensive review of the periodical and patent literature.

COIR FIBER: STRUCTURE AND MECHANICAL PROPERTIES. F. Stern (Brit. Jute Trade Res. Assoc.). J. Textile Inst. 48: T21-T25 (Jan. 1957). (323)

The main features of the structure of coir fiber are discussed with special reference to the spiral fibrillar structure of the ultimate fiber cells and its effect on the extensibility and elastic properties of the fiber. The fiber combines a high degree of intra-fibrillar orientation with elastic properties generally associated with relatively poorly oriented regenerated cellulose fibers. 9 references.

MAN-MADE FIBERS A 2

NEW FIBERS. PART 1. POLYAMIDE, POLYESTER, AND ACETATE FIBERS. A. J. Hall. Fibres 18: 5-8 (Jan. 1957). (324)

Progress in man-made fiber technology is reviewed.

SYNTHETIC FIBER FILTERS: TECHNICAL USE INVOLVING NEW SPINNING TECHNIQUE. A. J. Hall. Fibres 17: 365-366 (Nov. 1956). (325)

Apparatus and technique for manufacturing synthetic fibers in matted or felted form for use as filters for smoke or aerosols. Diagram.

CRESLAN: A PROGRESS REPORT. Am. Cyanamid Co. Am. Textile Reptr. 70: 13-14, 44-45 (Nov. 22, 1956). (326)

Mechanical and processing properties, as well as fabric applications, of this new acrylic fiber are covered.

TRIACETATE YARNS AND STAPLE. Courtaulds Ltd. Textile Merc. 135: 428-433 (Sept. 14, 1956); 463-466 (Sept. 21, 1956); 545-546 (Oct. 5, 1956); 596-597 (Oct. 12, 1956). (327)

Properties, processing, and uses of Courpleta.

TRICEL FABRIC PRODUCTION. Textile Wkly. 56: 1846-1847 (June 29, 1956); 53-54 (July 6, 1956). (328)

Notes from British Celanese Ltd. technical service manual. Part 1. General fiber properties. Part 2. Sizing, weaving, and subsequent processes.

DENSITY, INFRARED ABSORPTION, AND CRYSTALLINITY IN 66 AND 610 NYLONS. H. W. Starkweather, Jr. and R. E. Moynihan (E. I. du Pont de Nemours & Co.). J. Polymer Sci. 22: 363-368 (Dec. 1956). (329)

EFFECT OF DRAWING ON THE INFRARED DICHROISM OF NYLON 66 FILAMENTS. G. Caroti and J. H. Dusenbury (Textile Res. Inst.). J. Polymer Sci. 22: 399-407 (Dec. 1956). (330)

CELON: THE NEW CELANESE FIBER. PART 2. J. W. Fisher. Fibres 17: 126-128 (April 1956). (331)

The physical properties of Celon and Celon blends are considered.

INDUSTRIAL USES OF TERYLENE. E. D. Rossiter. J. Textile Inst. 47: P1003-P1014 (Dec. 1956). (332)

The physical and chemical properties of Terylene filament and staple fiber are reviewed, and the use of Terylene for ropes, fishnet twines, sewing threads, conveyor belts, and fire hose are considered in detail.

YARN PRODUCTION B

HUMIDITY IN TEXTILE PROCESSING. PART 1. R. Porter. Textile Recorder 74: 70-71 (Dec. 1956). (333)

The effects of humidity variations during processing on lap weight, wrappings, yarn strength, end breakages, winding tension, and weaving are discussed.

HUMIDITY IN TEXTILE PROCESSING. PART 2. R. Porter. Textile Recorder 74: 50-51 (Jan. 1957). (334)

The effect of humidity on the man-made fibers, the problem of static electricity in processing, and atmospheric conditions desirable at various stages of manufacturing are discussed briefly. 10 references.

COTTON SPINNING MACHINERY AT THE TECHNICAL FAIR, HANNOVER, 1956. O. Reinhardt. Textil-Praxis (English ed.) No. 4: 145-150 (Dec. 1956). (335)

Various German cotton processing machines from opening through spinning are described. Photographs. Diagrams.

CONTROLLING AND REWORKING COTTON WASTE. M. Gross. Textile Ind. 121: 155-157 (Feb. 1957). (336)

Suggestions for classifying and minimizing waste are given. Tables.

DUST EXTRACTION IN FLAX SPINNING. J. C. Heslip. Textile Recorder 74: 56-58 (Jan. 1957). (337)

Dust extraction methods for use at flax hackling machines, cards, combing machines, and drawing frames are described. Photographs. Diagrams.

PROCESSING NYLON STAPLE FIBER. PART 1. WOOLEN SYSTEM. PART 2. WORSTED SYSTEM. Brit. Nylon Spinners Ltd. Textile Merc. 135: 813-814 (Nov. 16, 1956); 859-861 (Nov. 23, 1956). (338)

TOW TO YARN SPINNING SYSTEM. K. Mihira (Yamagata Univ.). J. Textile Machinery Soc. Japan 2: 22-35 (Oct. 1956). (339)

In a new system using the conventional 2-step Per-Lohke system machine, tow is processed to produce weak points at regular intervals, and the processed tow is converted into sliver by a 2-step type roller draft-cutting machine. Theoretical aspects of the system are discussed, and experimental data are given. Graphs. Tables. Diagrams. 4 references.

RIETER GRINDER FOR PRESSURE ROLLS. O. Reinhardt. Textil-Praxis 11, No. 6: 538-542 (1956). In German. Through BCIRA 36: 548 (1956). (340)

The machine is described and illustrated, and general directions are given for grinding, covering tubes open at both ends and with closed sides, and grinding pressure rolls with conical base.

OPENING, PICKING, FIBER PREPARATION B 1

EFFECT OF HEAT AND GINNING EQUIPMENT ON COTTON PROCESSING. J. L. Delany (Joanna Cotton Mills). Textile Ind. 121: 136-138 (Feb. 1957). (341)

Results of mill tests on the effect of the type of gin equipment, as well as the degree of heat applied, on the processing characteristics of cotton fibers.

NEW DESIGN IN HOPPER FEEDERS. A. Bonser. Textile Mfr. 83: 14-15 (Jan. 1957). (342)

The unique feature of the Haigh double hopper feeder for wool (John Haigh & Sons Ltd) is an ingenious automatic trigger mechanism whereby the first hopper is controlled to feed the second hopper intermittently as required to maintain the material in this second hopper at a constant level.

FLEXIBILITY IN FIBER CONVEYING. Shirley Inst. Textile Wkly. 56: 1259-1260 (Nov. 2, 1956). (343)

The Shirley pneumatic delivery wheel (Brit. patent 754 670) is made of a length of ducting into the center of which projects a portion of a perforated disc or wheel which interrupts the passage of the cotton. A small electric motor rotates the disc, delivering the cotton through a hinged flap into the hopper below. Choking is claimed to be impossible. Photographs.

RECENT DEVELOPMENTS IN WOOLEN AND WORSTED YARN PRODUCTION. PART 1. AUTOMATIC WEIGHING AT THE FEARNOUGHT. P. P. Townend (Leeds Univ.). Wool Rev. 30: 33 (Jan. 1957). (344)

An automatic weighing device, designed for obtaining uniform output from the fearnought, is described.

EFFECT OF FIBER MIXING INTENSITY ON YARN QUALITY. W. Stritz. Textil-Praxis 11, No. 6: 534-535 (1956). In German. Through BCIRA 36: 547 (1956). (345)

The experiment described (using 67% cotton and 33% viscose rayon staple) shows that improved yarn regularity, slightly higher tensile strength, reduced scattering of the fiber distribution, and a less cut yarn are obtained by more intensive mixing. Since 2 drawing passages are insufficient for ideal mixing and more than 3 would be uneconomical, it might be of interest to determine whether mixing in the hopper feeder would give better results.

HIGH COMPRESSION CALENDER ROLLS FOR THE PICKER. Saco-Lowell Bull. 28: 34-35 (Dec. 1956). (346)

Saco-Lowell pickers equipped with these new calender rolls make 85 pound laps possible. This changeover is designed to produce heavier and firmer picker laps for increased creeling intervals and for decreased reworkable waste at the card. Diagram. Table.

SETTING THE PICKER REGULATOR MOTION. J. K. Clegg. Textile Recorder 74: 55, 74 (Jan. 1957). (347)

Method for determining the correct distance from the fulcrum to the final link in order to control the amount of movement of the cone drum belt on pickers fed by a hopper feeder.

PICKERS: AUTOMATICALLY CONTROLLED FEEDING. G. P. Deulina. Tekstil. Prom. 16, No. 6: 49-50 (1956). In Russian. Through BCIRA 36: 547 (1956). (348)

The apparatus described makes it possible to vary the thickness of the cotton layer in the feeding components of the machine within wide limits. The mechanism of the device is shown in a diagram.

CARDING AND COMBING B 2

CARDING WOOL/SYNTHETIC BLENDS ON THE WOOLEN SYSTEM. W. J. Crofts. Textile World 107: 112, 226-230 (Feb. 1957). (349)

Recommendations on yarn selection, fiber lubrication, fancy action, and carding speed are given.

METHODS OF CONTROL OF STRIPS, AND EFFECT OF AIR CURRENTS IN CARDING. G. Merenyi. Textile Mfr. 83: 27-30 (Jan. 1957). (350)

Experimental data are presented on the effect of flat speed variation on strip control and of air currents on the cotton carding process. Graphs. Diagrams. Summary of paper published by the Dept. of Textile Technology, University of Budapest, Hungary.

VACUUM STRIPPING OF CARDS. A. H. Milnes (Cook & Co. Ltd). Textile Wkly. 56: 1647-1651 (Dec. 7, 1956). (351)

Factors influencing the design of a good vacuum system are examined.

CARD BEND GRINDING MACHINE. Dronsfield Bros. Ltd. Textile Wkly. 56: 1611-1612 (Dec. 7, 1956). (352)

Features of the Dronsfield flexible card bend grinding machine no. 260 for obtaining accurately ground, concentric, flexible bend surfaces in the mill cardroom. Photographs.

ROTOMATIC FANCY CLOTHING FOR WOOL CARDS. E. Tempest and J. Goodall. Textile Mfr. 83: 19-21 (Jan. 1957). (353)

Rotomatic fancy clothing is devised to maintain the resiliency of the tooth, so that it will act in a more positive manner reducing the build-up in a swift, prolonging its running time, and minimizing the frequency of stripping. It is supplied in sheet form and can be applied in the ordinary way to any fancy roller.

PERFORMANCE TEST OF A NEW BELT-TYPE AUTOMATIC CARD STRIPPER. Y. Niitsu, S. Suzuki and A. Yoshikawa (Osaka Univ.). J. Textile Machinery Soc. Japan 2: 52-56 (Oct. 1956). (354)

Performance test of belt-type automatic card stripper designed by the authors.

MODERN WOOL COMBING PRACTICE. PART 8. HOLDEN AND NOBLE COMBS. R. Walker. Textile Mfr. 83: 10-13 (Jan. 1957). (355)

Essential features of the Holden and Noble combs are described. Diagrams. Photograph.

NIPPER IMPROVEMENTS FOR SACO-LOWELL MODEL 56 COMBER. Saco-Lowell Bull. 28: 36-40 (Dec. 1956). (356)

Features of the new nipper frame and nipper knife compression unit, designed to give high detaching efficiency. Photographs.

DRAWING AND ROVING B 3

VERSA-MATIC DRAWING FRAME. Saco-Lowell Bull. 28: 1-21 (Dec. 1956). (357)

Mechanical features, drafting principle, and production data are covered. Photographs. Diagrams.

FIBER SLIPPAGE IN SLIVER DURING DRAFTING. S. Watanabe (Tokyo Univ.). J. Textile Machinery Soc. Japan 2: 36-37 (Oct. 1956). (358)

Theoretical approach to the effect of fiber slippage on the draft number and its relation to roll weight, roll gauge, roll surface material, top roll bearing friction, etc.

LARGER ROVING PACKAGES. Saco-Lowell Bull. 28: 28-29 (Dec. 1956). (359)

A simple and economical means of increasing package size on certain gauge roving frames, now in operation, is described. Table. Photograph.

QUIK-SET ROVING. H. B. Stuart, Jr. Whitin Rev. 23: 46-52 (Dec. 1956). (360)

Features and advantages of the Whitin Quik-Set American system roving frame. Photographs. Diagrams.

CONTROLLING WOOLEN ROVING WEIGHTS. W. J. Deschenes (Quabbin Spinners). Textile Ind. 121: 130-132 (Feb. 1957). (361)

Sources of roving weight variations and methods for eliminating them are suggested. Photographs.

SPINNING, WINDING, TWISTING B 4

ECONOMIES IN COARSE COUNT SPINNING. Tweedales & Smalley (1920) Ltd. Textile Wkly. 56: 1211-1212 (Oct. 26, 1956). (362)

Comparison tests on 8s and 12s counts carried out in a Lancashire mill (using a 12 in. lift 3 in. ring diameter frame, the P. 3, and an orthodox post-war ring frame of 8 in. lift 2 in. ring diameter) showed a large increase in weight of yarn wound on the P. 3 bobbin, as well as other economies.

MODERNIZATION OF COTTON RING-SPINNING FRAMES. W. T. Swatek. Melliand Textilber. 37, No. 7: 764-768 (1956). In German. Through BCIRA 36: 548 (1956). (363)

Innovations introduced on ring-spinning frames, apart from the change in the size of the individual elements, are reviewed, including drafting rolls, spindles, spindle bearings, spindle drives, thread-guides, mechanical and pneumatic clearing devices, and lubricating devices.

SUCTION SYSTEMS VS. CLEARER ROLLS FOR RING SPINNING WASTE. H. Riethmüller. Textil-Praxis (English ed.) No. 4: 155-158 (Dec. 1956). (364)

Tests were made to compare the advantages and disadvantages of suction equipment and clearer rolls with respect to waste. Graphs.

OPTIMUM NUMBER OF SPINDLES AND PROBABLE EFFICIENCY AS A BASIS FOR PIECE-WORK WAGES IN RING SPINNING. K. Franke. Textil-Praxis 11, No. 7: 652-654 (1956). In German. Through BCIRA 36: 575 (1956). (365)

Optimum number of spindles per operative is calculated as a function of various factors (piecing of ends, changing the roving bobbin, distribution time, patrolling, etc.) and taken as a basis for determining probable productivity and piece-work wages.

EFFECT OF ROVING TENSION ON DRAFT IRREGULARITY. Y. Miura and S. Kawabata (Kyoto Univ.). J. Textile Machinery Soc. Japan 2: 42-47 (Oct. 1956). (366)

A method of measuring the roving tension between the bobbin on the creel and the drafting roll and the frictional force between the roving and the surface of the guide rod is given. The effect on draft irregularity of these two factors is examined. Diagrams. Graphs.

DRAFTING DEVICES OF JAPANESE HIGH-DRAFT SPINNING FRAMES. T. Ogawa (Kanegafuchi Spinning Co.). J. Textile Machinery Soc. Japan 2: 1-21 (Oct. 1956). (367)

Detailed descriptions of drafting devices manufactured by Howa Machinery, Ishikawa Seisakusho Co., Nittoh Iron Works, OM Spinning Machine Mfg. Co., Osaka Kiko Co., and Toyoda Automatic Loom Works. Photographs. Diagrams.

SG-3J SPINNING. Saco-Lowell Bull. 28: 30-33 (Dec. 1956). (368)

The SG-3J drafting assembly for Gwaltney spinning frames is designed for synthetic fibers up to 3 in. Special features are a long Duo-Roth top apron with supporting plane and the long tension controlled Shaw-type bottom apron. Photographs. Diagrams.

ROLLER DRAFTING UNDER UNSTATIONARY CONDITIONS: THEORETICAL APPROACH. T. Yamagishi, E. Koyama and H. Kuroe (Kurashiki Spinning Co.). J. Textile Machinery Soc. Japan 2: 38-41 (Oct. 1956). (369)

Correlation between variations in surface speed of rollers, sliver weight, and weight of spun yarn.

TRU-SET. Saco-Lowell Bull. 28: 22-27 (Dec. 1956). (370)

The Tru-set top arm assembly for spinning frames is a simple, rugged, top-roll suspension and weighting system, which is entirely self-contained. Its advantages and features are described. Photographs. Diagrams.

SKF DOUBLE APRON DRAFTING PK 211 E. G. U. K. Nair. Indian Textile J. 67: 105-108 (Nov. 1956). (371)

The SKF double apron drafting system, with pendulum self-weighting arm PK 211 E, is a 3-roller system developed for ordinary as well as high drafts. Mechanical features and advantages are enumerated. Diagrams.

WORSTED YARN MANUFACTURE. PART 2. N. Roper. Textile Mfr. 83: 3-6, 8 (Jan. 1957). (372)

The part played by carriers and tumblers (in the drafting zone during spinning) in controlling yarn uniformity and twist is discussed. Experiments are described.

DISADVANTAGES OF THE SELF-WEIGHTED DRAFTING FEED ROLL IN COTTON RING SPINNING. H. Haas. Textil-Praxis 11, No. 6: 537-538 (1956). In German. Through BCIRA 36: 549 (1956). (373)

The self-weighted feed roll is not necessarily advantageous and should be used only when there is a good reason. In new ring-spinning frames or reconstructions of the draw-frame, perfect gripping of roll pairs is obtained by air or spring pressure (e.g. the SKF Norma pendulum carrier system).

SYNTHETIC COVERS AND ANTI-FRICTION BEARINGS FOR TOP ROLLS. W. Stahlecker. Textil-Praxis (English ed.) No. 4: 159-162 (Dec. 1956). (374)

To use high roll pressures it is necessary to have synthetic roll covers, anti-friction bearings, and a roll weighting system which acts without inertia. Diagrams.

DEVELOPMENT OF THE ROLLER BEARING SPINDLE. W. Stahlecker and H. Stahlecker. Textil-Praxis (English ed.) No. 4: 151-155 (Dec. 1956). (375)

The development of the roller bearing spindle is traced, the damping problem explained, and an improved damping and centering device described. Diagrams.

SWISS HIGH-SPEED SPINDLE. Spindles, Motors & Machines Ltd. Textile Wkly. 57: 87 (Jan. 11, 1957). Textile Merc. 135: 1019-1020 (Dec. 21, 1956). (376)

Two features which make the S.M.M. roller-bearing spindle particularly interesting are: a flexible part in the spindle-bolster (universal joint), and an oil-damping device. Photograph. Diagrams.

TRAVELER WEIGHT SELECTION. Traveler No. 157: 8-11 (Oct. 1956). (377)

Chart to guide in the selection of proper traveler weights with regard to true tension for improved yarn production and quality.

WINDING CYLINDRICAL YARN PACKAGES FOR DYEING. R. Andersson and G. Nordhammar. Medd. Svenska Textilforskningsinst. No. 6: 1-19 (1956). In Swedish. (378)

Tests were conducted on a modified Müller winder. The hardness and the air permeability of the package were found to be well correlated, and both appear to be valid criteria for the density of the package. The yarn tension is the most important factor influencing the density. The pressure of the package against the

drum is also of some importance. The yarn speed and the density of the supply package appear to be without influence. Diagrams. 2 references.

PROGRESS IN DOUBLER-WINDING. Jos. Stubbs Ltd. Textile Wkly. 56: 1474-1475 (Nov. 23, 1956). (379)

The Stubbs Dubrake multi-end cheese winder represents an advance in the technique of doubler-winding yarns from 2-fold up to 6-end assembly, at a speed of up to 800 yards per minute. Photographs.

SUPER COPS. J. Saporta. Industrie Textile: 501-502 (July 1956). In French. Through BCIRA 36: 549 (1956). (380)

High density and homogeneity of a cop depend upon tight winding, quick crossing of the layers (about 3 spirals per revolution), and packing. Winding conditions for good cops are described and possible faults are enumerated.

WESTMORLAND DOUBLER. S. Dodd & Sons Ltd. Textile Merc. 135: 1051-1052, 1075 (Dec. 28, 1956). (381)

Features, operation, and production capacity of the Westmorland double-twist, heavy-duty doubler. Photographs.

TECHNICAL ASPECTS OF MODERN STRETCH YARN MANUFACTURE. E. Stowell (Universal Winding Co.). Hosiery Times 30: 51-63 (Jan. 1957). (382)

Following a discussion of the theory of producing stretch yarns, their continuous production by means of the Universal no. 550 stretch yarn false-twist machine for Superloft (Helanca) is described.

YARNS B 5

A NEW YARN CONCEPT. Am. Fabrics No. 39: 87-88 (1957). (383)

The Bobkowicz technique and apparatus for bonding fibers to produce so-called "bob" yarns is described. A continuous fiber web is welded to one or both sides of plastic sheets and slit into ribbons which are twisted and softened into yarns.

ESSENTIAL PROPERTIES OF HOSIERY YARNS. W. A. Dutton. Textile Wkly. 57: 19-22 (Jan. 4, 1957). (384)

The importance of strength, extension, recovery, knots, flexural rigidity, torsional rigidity, lubricants, and friction in hosiery yarns.

BULKED YARNS IN THE KNITTING INDUSTRY. M. W. Astle-Fletcher. Textile Wkly. 56: 1695-1698 (Dec. 14, 1956). (385)

Report of a talk on modern methods of processing stretch yarns, knitting pointers, and causes of fabric defects. Photographs. Diagram.

FIBER BLEND PROCESSING TECHNOLOGY: PRODUCTION OF BLENDED YARNS. F. Charnley. Man-Made Textiles 33: 40-41 (Jan. 1957). (386)

Characteristics of yarns spun from Fibro (viscose) blended with acetate, triacetate, cotton, nylon, Terylene, and Orlon.

STRIPING YARNS FOR WORSTED CLOTHS: WOOL/VISCOSE TWISTS. H. A. McLean. Wool Record 90: 29-30 (Oct. 25, 1956). (387)

Tables for calculating the percentage of viscose filament yarn of various deniers to be incorporated into a wool/viscose twist of specified count.

EASTMAN'S NEW 50 YARN. J. M. Heape and R. H. Norrell (Eastman Chem. Products). Modern Textiles Mag. 38: 33-34, 81 (Feb. 1957). (388)

Functional properties and processing characteristics of Eastman 50 acetate yarn. Photomicrographs.

TIRE CORD: STRUCTURE, ELONGATION, AND TENSION OF FIBRILS. M. Michelitsch. Melliand Textilber. 37, No. 7: 772-776 (1956). In German. Through BCIRA 36: 549 (1956). (389)

Construction and calculation of the elongation and tension curves of twisted rayon yarn with continuous fibrils are discussed, and it is shown that, by assuming a hyperbolical tension distribution in the yarn, the theory developed by the author can also be applied to 2- and multiply yarns.

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

WARP SIZING. PART 10. SIZING PROCESS (CONTINUED). P. V. Seydel. Textile Ind. 121: 142-153 (Feb. 1957). (390)

PIECE-LENGTH MARKING ATTACHMENT FOR SIZING MACHINES. R. Burgholz. Textil-Praxis 11, No. 7: 672-674 (1956). In German. Through BCIRA 36: 551 (1956). (391)

An electromagnetically-controlled piece-length marking attachment is described and illustrated, and its advantages are pointed out.

AUTOMATIC YARN CONDITIONING TURBINE FOR CONICAL PACKAGES. Morel Frères (Belgium). Textile Merc. 136: 151 (Jan. 25, 1957). (392)

USE OF SPECIAL TEAMS IN WARP CHANGING. J. Ernestus. Textil-Praxis 11, No. 6: 565-569 (1956). In German. Through BCIRA 36: 575 (1956). (393)

The work performed in connection with warp changing (cleaning of the loom, oiling and overhauling, insertion of a new warp beam, and setting of the loom) is discussed, with reference to its organization and costs.

£ s.d. OF WEFT PREPARATION. A. Ormerod (Ashton Bros. & Co. Ltd). Textile Wkly. 56: 1538-1541 (Nov. 30, 1956); 1641-1645 (Dec. 7, 1956); 1727-1728 (Dec. 14, 1956). (394)

A theoretical approach to weft preparation machinery replacement policy is presented in detail, and its practical application to mill operation is examined.

WEFT WINDING DEVELOPMENT: 10 SUCCESSIVE TYPES. Rev. Textile 55, No. 5: 271-274 (1956). In French. Through BCIRA 36: 551 (1956). (395)

The development of weft winders from 1894 to 1954 is reviewed, with special reference to automatic weft winding.

UNIFIL LOOM WINDERS ON COMBED COTTONS. Universal Winding Co. Textile Ind. 121: 122-124 (Feb. 1957). (396)

Mill performance of Unifil-equipped Draper X-2 looms weaving cotton fabrics, compared with a similar block of looms equipped with conventional rotating batteries, disclosed an average reduction in filling stops of 15% on all filling counts; and a reduction of 10% on 13s filling. Photographs. Table of filling stop causes.

UNIFIL LOOM WINDER. H. Marsden (Universal Winding Co.). Textile Merc. 136: 13-17, 33 (Jan. 4, 1957). (397)

Features and operation of the Unifil winder, conditions for successful operation, effects on weaving methods and routine, and economic aspects of the system are discussed. Photographs.

NOMOGRAMS FOR WINDING. E. Frieser. Textil-Praxis 11, No. 6: 544-545 (1956). In German. Through BCIRA 36: 575 (1956). (398)

The nomogram given shows the factors that affect the winding process on warp- or weft-winding machines: (1) weight of cop and yarn count; (2) number of spindles per operative; (3) winding-off time per cop in minutes; (4) manipulation time per cop. An example for the use of the nomogram is given.

WINDING: MORE AUTOMATION AT GREATER SPEEDS. Muschamp Textile Machy. Ltd. Textile Wkly. 56: 1395-1398, 1438 (Nov. 16, 1956); 1471-1472 (Nov. 23, 1956). (399)

Muschamp winders are described.

GROOVED-CYLINDER CHEESE WINDER. H. Eigenbertz. Melliand Textilber. 57, No. 7: 778-785; No. 8: 910-915 (1956). In German. Through BCIRA 36: 551 (1956). (400)

A description is given of a cheese winder with grooved cylinder for cotton, wool, worsted, and viscose/rayon yarns (W. Schlafhorst & Co.), with reference to constructional details, mechanism, and advantages. Diagrams. Photographs.

CONE AND CHEESE WINDERS AT THE TECHNICAL FAIR, HANNOVER, 1956. K. Weigel. Textil-Praxis (English ed.) No. 4: 162-169 (Dec. 1956). (401)

Diagrams. Photographs.

DETERMINATION OF OPTIMUM SPLIT RING SIZE FOR COP-CHANGE BOBBIN. M. Tsuzuki, Y. Tanaka, Y. Kamimura and H. Hayashi. J. Textile Machinery Soc. Japan 2: 48-51 (Oct. 1956). (402)

A theoretical study.

WEAVING C 2

SELF-LUBRICATING BEARINGS FOR LOOMS. W. C. Westbrook. Textile World 107: 102-103 (Feb. 1957). (403)

Loom parts which are worth salvaging and fitting with self-lubricating bearings are noted. Diagrams.

A STUDY IN LOOM FIXING. PART 11. F. D. Herring. Textile Bull. 83: 78-81 (Jan. 1957). (404)

The causes for filling breakage before the transfer and procedures for overcoming it are covered.

LOOM MAINTENANCE. Man-Made Textiles 33: 48-49 (Jan. 1957). (405)

The use of a loom inspection chart and fault finding chart to achieve constant settings for a group of looms is explained with examples. Photographs. Graph.

TRACKING DOWN THE CAUSES OF REPPING. K. Greenwood. Man-Made Textiles 33: 44-46, 55 (Jan. 1957). (406)

The BRRA warp tension balance was developed to enable overlookers to adjust their looms quickly and accurately so as to avoid repping faults in plain weaves after loom stoppages. Mechanical details of the balance and its use are described. Photographs. Graph.

INDIVIDUAL LOOM DRIVE. J. Schneider. Textil-Praxis (English ed.) No. 4: 170-173 (Dec. 1956). (407)

Features of the Stephan Werke GmbH drive with friction clutch, quick-action brake, and mechanical reverse

motion, are described. For looms in which no quick-action brake is needed, the drive can also be supplied with a slipping clutch. Diagrams.

WEAVING EXPERIMENTS ON LINEN LOOMS WITH IMPROVED SHAFT MOTION. H. Griese. Textil-Praxis 11, No. 6: 559-565 (1956). In German. Through BCIRA 36: 552 (1956). (408)

Comparative experiments made with a rebuilt loom (in which the superstructure was removed and the shafts received a positive drive of the Dornier type) and a normal linen loom with superstructure showed the distinct superiority of the loom with guided shaft motion, with regard to frequency of warp breakages, strength of the fabric, and setting of the loom.

TERRY WEAVING. M. Ziegler and R. Birk. Textil-Praxis 11, No. 7: 666-669 (1956). In German. (409)

General directions for manufacturing terry fabrics, including jacquard terry, with reference to a number of special looms. Photographs.

EVOLUTION OF A MODERN LOOM. George Hattersley & Sons Ltd. Textile Wkly. 56: 1731-1736 (Dec. 14, 1956). (410)

The mechanical features of the Hattersley automatic reshuttling 382 model low-built silk and rayon loom are described in detail. The new loom may be made a weft pirn changer by the incorporation of the George Fisher multi-color battery. Photographs.

GERMAN AUTOMATIC LOOM. A. Bernatschek. Melliand Textilber. 37, No. 7: 788-789 (1956). In German. Through BCIRA 36: 551 (1956). (411)

The new German automatic loom Hrdina with a novel action warp let-off motion and shuttle feeling device which actuates the pirn change mechanism is described briefly.

SULZER WEAVING MACHINE. M. Steiner (Sulzer Bros.). Textile Wkly. 56: 1329-1331 (Nov. 9, 1956); 1401-1406 (Nov. 16, 1956); 1500-1502 (Nov. 23, 1956). (412)

Development, performance, maintenance, application, productivity, mill trials, etc. Photographs. Diagrams.

WEAVING BROCADES ON SINGLE-SHUTTLE LOOMS. L. Zeldis. Textile World 107: 111 (Feb. 1957). (413)

ORNAMENTED FABRICS ON HANDLOOMS. B. M. Bysack. Indian Textile J. 67: 41-43 (Oct. 1956). (414)

The tie and dye techniques of producing Indian Katari, Rajputana, Orissa, and Patola fabrics are briefly outlined, and a simple method for producing fabrics with Orissa effects is described. Diagrams.

WAGES SYSTEM DESIGNED FOR WEAVING FILAMENT YARNS. A. Laszlo. Textile Mfr. 83: 25-26 (Jan. 1957). (415)

TEMPLES: NEW DEVELOPMENTS. G. Hanke. Spinner u. Weber 74, No. 16: 722-725 (1956). In German. Through BCIRA 36: 552 (1956). (416)

Various types of temples are reviewed and illustrated, including mechanisms for heavy or very sensitive fabrics.

RAWHIDE PICKER. Pickers Ltd. Indian Textile J. 67: 100-101 (Nov. 1956). (417)

This new Indian reinforced "blister" form picker (Indian patent 52 267) has a large mass of rawhide located near the holes through which the picker spindle is passed, as well as on the face which takes the full buffer impact. Diagrams. Photograph.

WEFT INSERTION BY FLOATING CARRIER. E. R. Laithwaite. Textile Wkly. 57: 234-235 (Jan. 25, 1957); 331-333 (Feb. 1, 1957). (418)

New developments in electromagnetic shuttle propulsion. Diagrams.

SHUTTLE CHANGE IN WEAVING BLOCK CHECKS ON THE MECHANICAL PATTERN LOOM. P. Kreutz. Textil-Praxis 11, No. 7: 660-661 (1956). In German. Through BCIRA 36: 552 (1956). (419)

Shuttle changing motions in which, by displacing certain shuttles, it is possible to effect each time two orders of picks. Examples are given.

LONGER SHUTTLE LIFE. Draper Corp. Textile Ind. 121: 159 (Feb. 1957). (420)

Recommendations for securing maximum shuttle life by using a planned shuttle-maintenance program. Diagrams.

KNITTING C 3

OVERCOMING A BULKED YARN PROBLEM. Evans, Thompson & Co. Ltd. Textile Wkly. 56: 1548 (Nov. 30, 1956). (421)

A take-off device (ETC anti-snarl) for curing snarling and ballooning difficulties during knitting with high twist, bulked, and crimped yarns is described.

LOOPER POINT MAINTENANCE. D. E. Anderson (Hanes Hosiery Mills). Textile World 107: 98-99, 151 (Feb. 1957). (422)

Procedures for when and how to straighten points.

HIGH PILE KNITTED FABRICS. W. E. Shinn. Knitter 21: 25-31 (Jan. 1957). (423)

Carding, knitting, and finishing processes and machinery for high pile fabrics are described. Photographs. Diagrams.

HIGH-PILE KNIT FABRICS FROM STAPLE. Textile Ind. 121: 199, 201, 203 (Feb. 1957). (424)

The preparation of knit pile fabric from staple using the Wildman FBW4 standard latch needle circular jersey machine and Turbo electro-finisher, shearer, and wet applicator, is described. Photographs. Diagram.

PATTERNING PRINCIPLES IN WEFT KNITTING. PART 4. PLAIN EYELET STRUCTURES. J. Rab. Man-Made Textiles 33: 50, 52 (Jan. 1957). (425)

KNITTING AND FINISHING CIRCULAR FABRICS FROM AGILON YARN. Textile Mfr. 83: 7-8 (Jan. 1957). (426)

FABRICS C 4

DESIGN IN WOVEN STRUCTURE. PART 49. DOUBLE PLAIN CLOTH STRUCTURES. D. C. Snowden. Wool Rev. 30: 35, 37 (Jan. 1957). (427)

ORNAMENTATION OF APPAREL FABRICS: SPOT DESIGNS. PART 3. V. Lobl. Modern Textiles Mag. 38: 50-52, 58-59 (Jan. 1957). (428)

The ground weave and drafting of the weave diagram on the design paper are discussed.

ORNAMENTATION OF APPAREL FABRICS: SPOT DESIGNS. PART 4. V. Lobl. Modern Textiles Mag. 38: 48-56, 74 (Feb. 1957). (429)

How the different pattern arrangements can be further modified or augmented to produce a more varied appearance.

TUFTED CARPET MACHINES. Cobble Bros. Machy. Co. Textile Wkly. 56: 1544-1547 (Nov. 30, 1956). (430)

The types of machines (loop and cut pile) available from Cobble Bros., yarns to be used, and attachments for producing geometric, scroll, and floral designs are briefly described. Diagrams. Photographs.

FILTER CLOTHS. A. J. Gluckstern (Stehli & Co.). Modern Textiles Mag. 38: 31-32 (Jan. 1957). (431)

Essential requirements of filter fabrics are enumerated, and the advantages of synthetic fabrics over natural fabrics are pointed out.

NEW TRENDS IN PILE FABRICS. G. E. Herrnstadt (Firth Carpet Co.). Modern Textiles Mag. 38: 60-66 (Jan. 1957). (432)

Trends in machinery and methods for woven, knitted, hooked, tufted, and nonwoven pile fabrics are reviewed. References.

COTTON IN COATED FABRICS. National Cotton Council, Memphis, Tenn., 1956. 27 p. Free. (433)

A survey of types of coatings used, coating methods, markets, competition, quality considerations in backings and in coated fabric competitors, cost factors, standards, and research opportunities.

BONDED FABRICS: INTRINSIC ADVANTAGES. G. H. Elliott. Skinner's Silk & Rayon Record 31: 60-64 (Jan. 1957). (434)

Factors influencing choice of web formation method and bonding agents are discussed, and the properties and uses of various commercial bonded fabrics are reviewed. Swatches.

PRODUCING BONDED FIBER FABRICS. Skinner's Silk & Rayon Record 31: 66-68 (Jan. 1957). (435)

Carding and aerodynamic methods of making fiber webs, as well as the choice of fiber and adhesive, are discussed briefly.

BRITISH AND U. S. BONDED FABRICS. P. Abbenheim. Skinner's Silk & Rayon Record 31: 51-53 (Jan. 1957). (436)

Brief survey of nonwoven fabric trends in the U. S. and Great Britain.

BONDED AND "CARE-FREE" MATERIALS. A. J. Hall. Texture 3: 132-134 (Dec. 1956). (437)

Different methods of producing nonwoven fabrics and wash and wear fabrics are briefly reviewed. 6 references.

REDUCING FELT COSTS. M. T. Hoffman. Wool Rev. 29: 40 (Oct. 1956). (438)

Latest progress in felting techniques and machines are described, including shrinking pressed felt in full width, and automatic 2-step multi-purpose felting.

STRONG PAPER FABRICS CHALLENGE OLD TEXTILE PRODUCTION METHODS. C. W. Kohlman (Am. Cyanamid Co.). Am. Textile Reptr. 70: 35, 43-44 (Nov. 22, 1956). (439)

Chemical and fiber additives give improved strength and finishes to paper for many unusual uses, including clothing.

PILLING: CAUSES, EXAMINATION, PREVENTION. H. Driesch. Melliand Textilber. 36, No. 7: 789-795; No. 8: 921-925; No. 9: 1034-1041 (1956). In German. Summary in BCIRA 36: 565 (1956). (440)

PILL FORMATION IN KNIT AND WOVEN FABRICS. F. Lender. Textil-Praxis (English ed.) No. 4: 175-181 (Dec. 1956). (441)

A discussion of the causes of pilling and methods for its elimination is followed by a brief description of available testers and their operation.

FINISHING AND CHEMICAL PROCESSING D

PROGRESS IN BLEACHING, DYEING, AND FINISHING DURING 1956. Man-Made Textiles 33: 66-67 (Jan. 1957). (442)

23 references.

CHEMICAL PROCESSES D 1

REVIEW OF TEXTILE FINISHING, 1956: BLEACHING, DYEING, PRINTING, AND FINISHING PROGRESS. Textile Wkly. 56: 1811-1816, 1829 (Dec. 21, 1956); 1889, 1902 (Dec. 28, 1956). (443)

Includes references.

COLORED HEEL NYLONS: PROCESSING. H. White (Lee Hosiery Finishers). Hosiery Underwear Rev. 40: 81, 84-85 (Feb. 1957). (444)

Precautions for the processing of nylon hosiery with resist-dyed nylon yarns in the heels and soles.

CREPE TECHNIQUES. C. H. Fischer-Bobsien. Spinner u. Weber 74, No. 16: 727-729 (1956). In German. Through BCIRA 36: 558 (1956). (445)

Various types of crepe fabrics are reviewed, with reference to finishing details and features of mechanical and chemical processes. 12 references.

WET PROCESSING OF LUREX. L. E. Seidel (Dobeckmun Co.). Am. Dyestuff Reptr. 46: P27-P30 (Jan. 14, 1957). (446)

The 3 basic types of Lurex metallic yarn in common use, with special emphasis on the effects of cotton, synthetics, and wool processing on each type, are discussed. Recommendations are made on time, temperature, and concentrations best suited to Lurex yarns.

ASTON LT: ANTISTATIC FINISH. G. C. Tesoro (Onyx Oil & Chem. Co.). Modern Textiles Mag. 38: 47-48 (Jan. 1957). (447)

Aston LT deposits a hygroscopic, thermosetting polyelectrolyte on the surface of the fibers, and is cured to an insoluble resin of high ionic concentration. It is effective in small amounts on all fibers and is durable to washing and drycleaning.

FABRIC CONDITIONING. G. H. Denford (D. R. Plews Ltd). Textile Wkly. 56: 1614-1618 (Dec. 7, 1956). (448)

Features of the Plews conditioning machine, in which the fabric is conveyed open width through a conditioning atmosphere produced by mechanically atomized water in a powerful stream of air.

NEW SINGLE-STAGE CONTINUOUS BLEACH. H. D. Terhune (E. I. du Pont de Nemours & Co.). Textile Age 21: 44-47 (Feb. 1957). (449)

The principal advantages of the Solo-Matic process over multi-stage continuous bleaching systems are summarized, and an estimated cost and investment comparison is given. Diagram. Tables.

SOLUBLE CHEMICALLY MODIFIED COTTON FIBERS. R. M. Reinhardt and J. D. Reid (Southern Regional Res. Lab.). Textile Research J. 27: 59-66 (Jan. 1957). (450)

The various types of cellulose derivatives which are water- or alkali-soluble are reviewed, and their possible use as soluble fibers is considered. Details of the preparation of soluble fibers from cotton by hydroxyethylation, carboxymethylation, and oxidation are given. Factors affecting the solubility of chemically modified cotton, present uses of soluble fibers, and possible future uses are discussed. 34 references.

MICROSCOPICAL OBSERVATIONS ON PARTIALLY ACETYLATED COTTONS AND RELATED FIBERS. V. W. Tripp, R. Guiffria and I. V. deGruy (Southern Regional Res. Lab.). Textile Research J. 27: 14-24 (Jan. 1957). (451)

Effects of acetylation on the morphology and submicroscopic structure of cotton were studied by light and electron microscopy. The light microscope was used to study the relationship of the acetyl content of partially acetylated cotton fibers to their average cross-sectional area, refractive indexes, and response to swelling agents and dyes. Surface replicas, cross sections, and fragments of partially acetylated cotton were examined in the electron microscope. Photomicrographs. 15 references.

INFLUENCE OF MICRONAIRE FINENESS AND PRIOR TREATMENTS ON THE CYANOETHYLATION OF COTTON. R. M. Reinhardt and J. D. Tallant (Southern Regional Res. Lab.). Textile Research J. 27: 24-29 (Jan. 1957). (452)

Fiber fineness, as measured by the Micronaire, and prior treatments were found to be important factors in determining the rate and extent of cyanoethylation of cotton. Fineness was found to be a good index of the rate of reaction for both raw and pressure-boiled cotton fibers. Prior treatment of yarn by ethanol extraction, pressure boiling with 2% caustic, ethanolamine extraction, and mercerization--both slack and at constant length--affected the rate of cyanoethylation and the rot resistance of the product. 15 references.

CELLULOSE-ALKALI HYDROXIDE-WATER SYSTEM IN THE CYANOETHYLATION OF COTTON CELLULOSE. E. Klein, J. W. Weaver, B. G. Webre and J. F. Jurgens (Southern Regional Res. Lab.). Textile Research J. 27: 50-53 (Jan. 1957). (453)

Variations in yield and rate of cyanoethylation can be explained by considering the changes brought about in cellulosate ion concentration, solubility of acrylonitrile, and bond strengths, by varying the amount, concentration, and nature of the alkali hydroxide on the cellulose. The microbiological resistance of the product is also dependent on the same ratios. The rate of reaction and yield of cyanoethylated cotton can be greatly improved by the inclusion of hydrotropic salts in the padding liquor. 9 references.

CHEMICAL MODIFICATION OF COTTON BY REACTION WITH ACRYLONITRILE. J. Compton (Inst. Textile Tech.). Furman Univ. Bull. 3: 18-44 (Fall 1956). (454)

The 1-step and 2-step processes for cyanoethylation of cotton on a laboratory and pilot-plant scale are described. A comparison of the properties of cotton and cyanoethylated cotton is made. 26 references.

CREASEPROOFING FABRICS WITH EPOXY RESINS. C. W. Schroeder and F. E. Condo (Shell Development Co.). Textile Ind. 121: 163, 165 (Feb. 1957). (455)

With the epoxy resins, it is possible to obtain a crease-resistant white fabric which can be washed repeatedly, bleached, and ironed, without scorching or loss of strength. Application of epoxy resins to cotton and properties obtained are described. Graphs. Table.

QUANTITATIVE DETERMINATION OF THE RESIN CONTENT OF CREASEPROOFED FABRICS AND THE BEHAVIOR OF THESE FABRICS TO VARIOUS TREATMENTS, EXPRESSED GRAPHICALLY. PART 2. BEHAVIOR OF CREASEPROOFED FABRICS DURING VARIOUS TREATMENTS, EXPRESSED GRAPHICALLY. G. Monte. Melliand Textilber. 37, No. 7: 846-849 (1956). In German. Summary in BCIRA 36: 567 (1956). (456)

KEEPING FABRICS CLEAN. PART 1. MODERN PRACTICE IN THE DRYCLEANING INDUSTRY. H. Sieber (Achille Serre Ltd). Fibres 17: 399-403 (Dec. 1956). (457)

This description of drycleaning practice and its associated problems includes material on sorting, solvents, plants and processing, re-texturing, and re-proofing.

KEEPING FABRICS CLEAN. PART 2. MODERN PRACTICE IN THE DRYCLEANING INDUSTRY. H. Sieber. Fibres 18: 13-15, 25 (Jan. 1957). (458)

Solvents and spotting and finishing procedures are described. Photographs.

CAMPHENE ET LE DEGRAISSEUR: ORIGINS OF DRYCLEANING. S. M. Edelstein (Dexter Chem. Corp.). Am. Dyestuff Reptr. 46: 1-8 (Jan. 14, 1957). (459)

Survey of historical literature on the use of organic solvents for drycleaning. 29 references.

REVIEW OF TEXTILE FINISHING. PART 6. FLAMEPROOFING. Textile Wkly. 56: 48 (July 6, 1956). (460)

Includes references.

SPECIAL FINISHES. G. Coe. Textile Mfr. 83: 39-41 (Jan. 1957). (461)

Brief review of the use of thermosetting and thermoplastic resins for producing permanent finishes.

CONTROLLED INTERMOLECULAR SPACING WITHIN CELLULOSE FIBERS. B. C. M. Dorset. Textile Mfr. 83: 34-38 (Jan. 1957). (462)

The theory and methods of permanently attaining an increased separation of cellulose molecules within cotton and rayon fibers by means of cross-bonding, filling-up, and copolymerization are discussed. Patent references.

PLEATING OF WOVEN AND KNIT FABRICS. A. Schuerch. Textil-Praxis (English ed.) No. 4: 181-183 (Dec. 1956). (463)

Recommended resin formulations and conditions for pleating cotton, rayon, and cotton/rayon blends.

SILICONE RESINS ON CELLULOSE ACETATE FABRICS. A. Mellor and P. Swillens. Rayonne et Fibres Synthet. 12, No. 7: 975-984 (1956). In French. Through BCIRA 36: 558 (1956). (464)

Optimum conditions for the treatment of cellulose acetate fabrics with commercial silicone resins are discussed, with special reference to the application of Drisil products. The effects of silicone resins on the individual properties of acetate fabrics are enumerated. Waterproofing can be combined with crease-resistant finishes.

REVIEW OF TEXTILE FINISHING. PART 7. PROOFING AGAINST ROT AND MOTH DAMAGE. Textile Wkly. 56: 258, 262 (July 27, 1956). (465)

Includes references.

CATIONIC SOFTENERS: SECONDARY EFFECTS ON FABRICS. AATCC. Phila. Sect. Am. Dyestuff Reptr. 46: P41-P57, P64 (Jan. 28, 1957). (466)

Nine cationic softeners were applied to Acrilan, Arnel, cotton, nylon, rayon, and wool fabrics under mill conditions. Relative differences between softener types on

such fabric properties as tear strength, seam strength, electrical resistivity, ageing, heat, and color change resulting from ageing, heat, and ultraviolet light, were determined. Tables. Graphs. 10 references.

CARBONIZING AND NEUTRALIZING WOOL. S. Kitazawa (Kanegafuchi Spinning Co.). J. Textile Machinery Soc. Japan 2: 65-70 (Oct. 1956). (467)

Results of experiments on the distribution of temperature and humidity during carbonizing (using varying degrees of steam pressure) and the efficiency of neutralization in a 3-bath machine. Diagrams. Graph. Tables.

COMBINED MILLING AND SCOURING MACHINE. D. R. H. Williams. Textile Mfr. 82: 644-645 (Dec. 1956). Wool Record 90: 1301-1302 (Dec. 13, 1956). (468)

Mechanical features and economic advantages of the Williams-Sellers machine (Sellers & Co. (Huddersfield) Ltd) are discussed. Photographs.

EFFECT OF STEAM ON WOOL FIBER PROPERTIES. C. H. Nicholls (Wool Textile Res. Labs., Australia). Australian J. Appl. Sci. 7: 365-370 (Dec. 1956). (469)

An investigation of the effect of the presence of acid or alkali in wool fibers on degradation during steaming showed that the extent of damage is mainly due to disulfide bond breakdown which is dependent on the pH of the fiber. Wool in a mildly acid state can be treated with steam at 12 lb/in^2 pressure for periods up to 1 hr without causing undue damage. If residual alkali is present, steam treatments, even at atmospheric pressure, cause considerable damage. 8 references.

TREATMENT OF WOOL WITH ACID BROMATE SOLUTIONS. K. W. Statham (Abbey Meadow Mills, Wolsey Ltd). Textile Research J. 27: 41-49 (Jan. 1957). (470)

The reaction of acid bromate solutions with wool is activated by the addition of strong reducing agents, and in the majority of cases part of the bromate is reduced to bromide, the bromide then reacting with unchanged bromate to produce bromine. In the case of reactions involving aldehydes such as formaldehyde and glyoxal, a different mechanism is probably involved, since addition of moderate amounts of silver salts does not affect the rate of reaction or the degree of unshrinkability produced. 23 references.

MODIFIED ACID COLLOID PROCESS FOR CONTROLLING WOOL FABRIC SHRINKAGE. R. F. Nickerson (Monsanto Chem. Co.). Textile Research J. 27: 54-58 (Jan. 1957). (471)

The influences of several process variables on the dimensional stabilization of wool fabrics with melamine resin acid colloid were studied in the laboratory. Preparation of acid colloid, different organic acids, curing temperature, and solids deposited were among the variables examined. It was found that low temperature curing with higher resin solids deposits is as effective as high temperature curing with lower solids in controlling wash shrinkage. 9 references.

ACTION OF HYDRAZINE ON TERYLENE. J. C. Atkinson and J. B. Speakman (Leeds Univ.). (Letter to the editor). Chemistry & Industry No. 3: 74 (Jan. 19, 1957). (472)

Since Terylene is completely destroyed by a 2% solution of hydrazine in butanol in 60 min. at 100°C, but wool is unaffected, wool mixed with Terylene may be isolated and recovered for re-use by this method.

DYEING AND PRINTING D 2

DYEING WOOL/DRALON BLENDS. K. Bohn. Textil-Praxis (English ed.) No. 4: 184-192 (Dec. 1956). (473)

A critical examination of the 2-bath method, single bath 2-stage method, and single bath method for dyeing wool/Dralon is followed by a brief discussion of pre- and after-treatments.

DYEING CELLULOSE TRIACETATE. D. A. Garrett (Imp. Chem. Ind. Ltd). Dyer 117: 63-67 (Jan. 4, 1957). (474)

The application of azoic and disperse dyestuffs is described.

PIGMENT PADDING PROCESS. J. A. Clarke (Sandoz Products Ltd). Dyer 117: 29-32 (Jan. 4, 1957). (475)

The bulk dyeing of linen is examined, and requirements for maximum dye penetration are summarized. Diagrams.

CHEMNYLE PROCESS FOR DYEING FILAMENT NYLON. W. H. Hindle (Chemstrand Corp.). Am. Dyestuff Reptr. 45: P972-P974 (Dec. 31, 1956). (476)

A brief history of the dyeing of filament nylon is followed by a discussion of the development of the Chemnyle process for yarns, packages, piece-goods, etc. The method is outlined. The process is claimed to eliminate or minimize streakiness, give good washfastness and lightfastness, make brilliant shades feasible, and yield soft fabric hand.

DYEING PROBLEMS OF RILSAN. A. Zuber and A. Baron. Melliand Textilber. 37, No. 7: 822-828 (1956). In German. Through BCIRA 36: 555 (1956). (477)

The properties of Rilsan are reviewed, with special reference to its behavior to disperse, acid, chromium-complex, azo, and vat dyes. Dyeing of Rilsan/wool, Rilsan/cellulose, and Rilsan/synthetic fiber blends, printing of Rilsan, and dyeing of the fibers in bulk are also discussed.

DYEING TERYLENE. J. S. Schofield. Textile Wkly. 57: 46-50 (Jan. 4, 1957); 124-126, 131 (Jan. 31, 1957). (478)

EFFECT OF LATEX COMPOUNDS ON THE DYEING OF SPUN VISCOSE RAYON CARPETING WITH SELECTED FAST TO LIGHT DIRECT DYES. AATCC. South Central Sect. Am. Dyestuff Reptr. 45: P965-P971 (Dec. 31, 1956). (479)

Tufted rayon carpet was processed using 12 selected dyes, several of which contained copper, together with counterparts which were copper free. 4 latex formulations were used: 3 compounded from natural latex and 1 compounded from GR-S. Latex was applied before and after dyeing. Tests were: light exposure (Fade-Ometer) AATCC wash test no. 2: oxygen bomb ageing; air oven ageing. Shade variations, together with significant latex deterioration, were evident. Tables. 3 references.

WOOL DYES. W. W. Williams. Encyclopedia of Chemical Technology 15: 115-119 (1956). (480)

A general survey, with emphasis on the new chelates and other recent developments. 9 references.

DEVELOPMENTS IN DESIGN OF MODERN DYEING MACHINERY. F. H. Marsh (Longclose Eng. Co. Ltd). Textile Merc. 135: 847-851, 868 (Nov. 23, 1956). (481)

The influence of factors affecting design, e.g., mechanization, fuel, production speed, standardization, automation, faster dyestuffs, and new fibers, is discussed. Photographs.

ELECTRICAL PRECISION DYEING. Bates Textile Mach. Co. Ltd. Dyer 116: 773-774 (Nov. 9, 1956). (482)

The Bates electrical precision dyeing method (British patent 721 352) consists in passing a wetted fabric through a series of electrodes, where sufficient electric current is caused to pass through the fabric to raise the temperature of the wetting liquid, by resistance heating, to the boiling point. It is now in use in the ribbon dyeing industry. Diagrams.

OXIDATION OF DYES ON COTTONS AND SYNTHETICS WITH PEROXYGEN CHEMICALS. Becco Chem. Div. Food Machy. & Chem. Corp., Station B, Buffalo 7, N. Y., 1956. 13 p. Bull. no. 75. Free. (483)

This bulletin describes procedures for the use of hydrogen peroxide for the oxidation of vat dyes on cottons and synthetics and also the oxidation of sulfur dyes with ammonium persulfate. Dye house practice on jig, package, and continuous machines is discussed.

CONTINUOUS DYEING WITH DIRECT DYESTUFFS. A. Schmitz. Can. Textile J. 74: 50-55 (Jan. 25, 1957). (484)

Continuous dyeing with direct dyes by means of the pad steam and pad roll processes. 5 references. This paper originally appeared in German in Z. ges. Textil-Ind. 57: 1131-1134 (1955).

PREVENTION OF UNEVEN SHADES IN PAD DYEING WITH ANTHRASOL DYES. K. Dickmanns. Textil-Praxis 11, No. 6: 597-599 (1956). In German. (485)

Instructions are given for eliminating unevenness between pieces dyed at the beginning and end of the pad process with anthrasol dyes. An example is given on how to calculate the amount of feeding liquor required to keep dye concentration the same.

PREVENTION OF DYE MIGRATION DURING FABRIC DRYING. G. Dierkes and R. Büstgens. Melliand Textilber. 37, No. 7: 834-835 (1956). In German. Through BCIRA 36: 554 (1956). (486)

The effects of various assistants on the migration of indanthrene dyes during fabric drying were examined. The best results were obtained by adding sodium alginate (5 g/l. of the padding liquor), which is cheap, does not interfere in the development of the dyeing, and does not affect the shade and depth of the tint.

INTERACTION OF CELLULOSE WITH SIMPLE SALT SOLUTIONS AND WITH DYEBATHS. M. Moncrieff-Yeates and H. J. White, Jr. (Textile Research Inst.). Am. Dyestuff Reptr. 46: P87-P96 (Feb. 11, 1957). (487)

Radioactive tracer techniques were used to study the absorption of various ions by cellulose from salt solutions and from dyebaths. The results on the absorption of ions from simple salt solutions can be interpreted qualitatively in terms of a simple Donnan equilibrium. The results on the absorption of ions in the presence of dye cannot be interpreted in terms of a Donnan equilibrium as modified by a Langmuir-type dye absorption. Electrostatic interaction between absorbed dye anions may be a reason for the discrepancy. 10 references.

EFFECT OF SOLVENTS IN DYEING. L. Peters and C. B. Stevens (Leeds Univ.). (Letter to the editor). J. Soc. Dyers Colourists 73: 23 (Jan. 1957). (488)

EQUILIBRIUM ADSORPTION VALUES OF LEUCO VAT DYES ON COTTON. R. H. Peters and H. H. Sumner (Imp. Chem. Industries Ltd). J. Soc. Dyers Colourists 73: 12-16 (Jan. 1957). (489)

The equilibrium adsorption of a series of leuco vat dyes on cotton was measured in various concentrations of sodium chloride and sodium hydroxide and the thermodynamic affinities calculated. Deviations from theory are observed in so far as the affinities are not constant, but show a regular drift as the concentration of electrolyte is changed. Two explanations for these deviations from theory are proposed and discussed. 10 references.

IN THE FOOTSTEPS OF PERKIN. W. H. Cliffe. J. Soc. Dyers Colourists 72: 563-566 (Dec. 1956). (490)

Description of an experiment undertaken to prepare Perkin's mauve in the modern laboratory. 7 references.

ACID DYES FOR WOOL, NYLON, AND SILK: STRUCTURE AND PROPERTIES. W. H. Armento (General Aniline & Film Corp.). Can. Textile J. 74: 43-49 (Jan. 25, 1957). (491)

The chemical structures used, methods of obtaining new structures during dye application, and the chemistry of the dyeing operation are discussed. 6 references.

FUR DYES AND THEIR OXIDATION PRODUCTS. W. E. Austin. Reply: G. Sandberg. (Letters to the editor). J. Soc. Dyers Colourists 72: 574-577 (Dec. 1956). (492)

RECENT ADVANCES IN THE FIELD OF ACID AND SUBSTANTIVE ANTHRAQUINONE DYESTUFFS. J. Gunthard (Sandoz Ltd). Am. Dyestuff Reptr. 46: 9-21 (Jan. 14, 1957). (493)

This summary of the field of anthraquinone dyestuffs primarily emphasizes developments since 1925. Chemical structures of the modern dyes are shown, and the lines of development followed to meet desired standards of shade, fastness to milling, and level dyeing are discussed.

SULFUR DYES. J. L. Crist and R. E. Rupp (Southern Dyestuff Corp.). Am. Dyestuff Reptr. 46: P83-P86 (Feb. 11, 1957). (494)

The general nature and properties of sulfur dyestuffs, advantages and limitations, textile applications, production and research developments, and dyeing procedures are reviewed.

XANTHENE DYES. W. G. Huey and S. K. Morse. Encyclopedia of Chemical Technology 15: 136-149 (1956). (495)

A review, with 37 references.

ENGRAVED ROLLER PRINTING. Textile Merc. 136: 145-149 (Jan. 25, 1957). (496)

Aspects discussed include soiling of print colors, the use of plain rollers, the merits and defects of brush furnishers, and the use of chromium-plated rollers.

TEXTILE PRINTING: BRITISH GUM THICKENINGS. Dyer 117: 189-191 (Feb. 1, 1957). (497)

Choice of thickenings, origin and development, color yield or dye transfer, early uses in mordant printing, uses in vat printing, alkaline gum thickenings, and chemical testing.

MANCHESTER AND THE ORIGIN OF THE DYESTUFFS INDUSTRY. R. Brightman. Chemistry & Industry No. 4: 86-91 (Jan. 26, 1957). (498)

SOME EARLY STAGES IN THE RENAISSANCE OF THE BRITISH DYEMAKING INDUSTRY: TALES FROM TURNBRIDGE, HUDDERSFIELD, 1899-1920. C. M. Whittaker. J. Soc. Dyers Colourists 72: 557-563 (Dec. 1956). (499)

Personal recollections of work at Read Holliday & Sons Ltd.

CELEBRATION OF THE CENTENARY OF THE DISCOVERY OF MAUVE BY W. H. PERKIN. C. J. W. Hooper. J. Soc. Dyers Colourists 72: 566-573 (Dec. 1956). (500)

The various methods adopted to commemorate in 1956 the centenary of the discovery by William Henry Perkin of mauve are outlined, and a bibliography is given of the most important articles which have appeared. 27 references.

MECHANICAL PROCESSES D 3

CONICAL ROLLER EXPANDER. K. Fujino and A. Horikawa (Osaka Univ.). J. Textile Machinery Soc. Japan 2: 61-64 (Oct. 1956). (501)

Formulas are derived for calculating the contact between cloth and expander, tension on cloth, and the degree of expansion. It is concluded that maximum expansion takes place at the roller ends. Diagrams. Graphs.

FINISHING CHINCHILLAS. Fibre and Fabric 109: 8-9, 32 (Dec. 1956). (502)

Brief outline of methods for proper finishing of chinchilla fabrics.

ELECTROSTATIC FLOCKING. Eloflock GmbH. Textile Merc. 135: 775-777 (Nov. 9, 1956). (503)

The Eloflock machines consist of an electrostate, which produces the high tension required, and a flock beamer containing the flocks which are then shot into the adhesive-coated surface. Features of the machines and flocking procedure are given. Photographs.

GAS SINGEING COTTON YARNS. F. Vogel. Textile Ind. 121: 119-121 (Feb. 1957). (504)

The importance of gas pressure, yarn number, yarn speed, yarn alignment, and dry vs. wet twisting are discussed, with emphasis on single singeing. Photographs. Diagram.

FABRIC COMPACTING. Am. Fabrics No. 39: 83-86 (Winter 1957). (505)

The Riggs & Lombard compacting machine gives shrinkage control and improved texture to a wide range of fabrics. The machine and its effect on man-made fabrics, woolens, and cotton are described, with photographs and fabric swatches to emphasize the improved textures obtainable.

DRYING D 4

MECHANISM OF DRYING AS RELATED TO STRUCTURE OF REGENERATED CELLULOSE. E. M. Hicks, Jr. (E. I. du Pont de Nemours & Co.). Furman Univ. Bull. 3: 67-88 (Fall 1956). (506)

Water bound in freshly formed regenerated cellulose occurs partly as bonded water and partly as capillary condensation. Almost all length change occurs during removal of bonded water. Irreversibility of drying occurs at a water content of 70%. This irreversibility cannot occur until adsorbed water is stripped from cellulose chains, which does not occur until removal of capillary water is virtually complete. 24 references.

FINISHING AND MOISTURE EXTRACTING MACHINE. F. W. Gebhardt. Melliand Textilber. 37, No. 7: 836 (1956). In German. Through BCIRA 36: 558 (1956). (507)

This machine extracts the moisture from the wet material not by means of squeezing rollers, but by vibration and compressed air, eliminating damage to fiber and fabric.

FAR-INFRARED HEATING IN TEXTILE PROCESSING. R. Ranson. Textile Bull. 83: 85-89 (Jan. 1957). (508)

The advantages and economics of far-infrared heating (radiation temperatures from approx. 600° F to 1500° F) are discussed, and installation and applications of far-infrared heaters are described. Photographs. Graph.

TESTING AND MEASUREMENT E

ASTM STANDARDS ON TEXTILE MATERIALS (WITH RELATED INFORMATION), NOV. 1956. Am. Soc. for Testing Materials, 1916 Race St., Philadelphia, Pa., 1956. 810 p. $6.25. (509)

This November 1956 edition contains definitions and terms, methods of testing, and specifications for textile and related materials developed by ASTM Committee D-13 on Textile Materials. Additional material appearing in appendixes includes tables on basic properties of textile fibers, for yarn number conversion, and relative humidity; proposed recommended practice for calculating number of tests; and drafts of several new test methods.

1956 SUPPLEMENT TO BOOK OF ASTM STANDARDS. PART 7. TEXTILES, SOAP, WATER, PAPER, ADHESIVES, SHIPPING CONTAINERS, ATMOSPHERIC ANALYSIS. Am. Soc. for Testing Materials, 1916 Race St., Philadelphia 3, Pa., 1956. 203 p. (510)

Contains the revised standards and the new and revised tentatives accepted since the appearance of the 1955 Book of ASTM Standards.

INTERNATIONAL STANDARDS IN TEXTILE TESTING. Can. Textile J. 74: 51-65 (Jan. 11, 1957). (511)

Historical background and Canadian participation, by L. J. Sheps, p. 51-53; Operation and some activities of I.S.O. Technical Committee 38, by C. H. Bayley, p. 53-55; Summarized description of some items studied by I.S.O. Technical Committee 38, by H. Palfreeman, p. 56-62; I.S.O. activities: colorfastness and shrinkage in laundering, by M. L. Staples, p. 62-65.

QUALITY BY MEASUREMENT. PART 1. THE NEED FOR PERFORMANCE STANDARDS. Textile Wkly. 56: 507-511 (Aug. 24, 1956). (512)

This review of the nature and scope of available quality controls points out that quality tests fall into two categories: (1) those designed to show the causes of existing faults, and (2) those designed to avoid faults. Part 1 discusses the types of performance tests used at present and describes instruments (fabric abrasion, carpet abrasion, Frazier hosiery, water repellency, and combined creasing and stiffness testers) to indicate the techniques involved.

QUALITY BY MEASUREMENT. PART 2. FABRIC TESTING AND ANALYSIS. Textile Wkly. 56: 593-598 (Aug. 31, 1956). (513)

Instruments and techniques used in determining and controlling finishing faults (optical, chemical, and dimensional) are discussed. Applications and descriptions of the radial pressure gauge, BRRA luster meter, and Shirley Institute Ampli-Dry dryness indicator are used as examples. Photographs.

QUALITY BY MEASUREMENT. PART 3. DIMENSIONAL STABILITY. Textile Wkly. 56: 661-664 (Sept. 7, 1956). (514)

Instruments available for checking on the dimensional stability of fabrics are discussed, and detailed descriptions of the Shirley automatic size box, Shirley weft unwinding tension meter, and the BRRA cloth profile recorder are included.

QUALITY BY MEASUREMENT. PART 4. YARN QUALITY. Textile Wkly. 56: 712-716 (Sept. 14, 1956). (515)

Instruments for assessing friction, elasticity, crimp, and strength in yarns are discussed, and detailed descriptions of the Shirley crimp tester, the HATRA yarn speed meter, and the Cook continuous thread tester are included.

QUALITY BY MEASUREMENT. PART 5. YARN IRREGULARITY. Textile Wkly. 56: 854-858 (Sept. 28, 1956). (516)

Sources of yarn irregularity during spinning and carding and instruments for detecting and eliminating causative factors are discussed, and detailed descriptions of the BRRA yarn patterning predictor, the Shirley moisture regain indicator, and the Shirley roller vibration detector are included.

QUALITY BY MEASUREMENT. PART 6. RAW MATERIAL CHARACTERISTICS. Textile Wkly. 56: 1867-1868 (Dec. 28, 1956). (517)

Tests and instruments for fiber length, maturity, and fineness are discussed briefly.

APPLICATIONS OF INFRARED SPECTROSCOPY TO TEXTILE PROBLEMS. C. G. Cannon (Brit. Nylon Spinners Ltd). Chemistry & Industry No. 2: 29-33 (Jan. 12, 1957). (518)

Review of infrared techniques for the analysis of fibers and fiber forming products. 25 references.

FIBERS E 1

COMPARISON OF EGYPTIAN AND AMERICAN METHODS FOR EVALUATING COTTON QUALITY. A. A. H. Abou Sehly, J. D. Tallant and R. K. Worner. Textile Research J. 27: 73-78 (Jan. 1957). (519)

Data obtained on different cottons by the techniques employed at the Giza Spinning Test Mill, Giza, Egypt, and the Southern Regional Research Laboratory, New Orleans, La., with particular attention to the newer instrumental methods, are described as an aid in correlating test data obtained by different methods and laboratories. 7 references.

NOTE ON THE DETERMINATION OF CRYSTALLINITY OF COTTON FIBER BY IODINE-ADSORPTION METHOD. K. S. Bhujang and C. Nanjundayya (Indian Central Cotton Comm.). (Letter to the editor). Textile Research J. 27: 79-80 (Jan. 1957). (520)

MIXED YARNS FROM WOOL AND CHEMICAL FIBERS. PART 4. ALKALI AND ACID SOLUBILITY OF YARN BLENDS FROM WOOL AND PERLON, DRALON, AND DIOLEN. H. Zahn and E. Kratzsch. Melliand Textilber. 37, No. 7: 818-821 (1956). In German. Summary in BCIRA 36: 563 (1956). (521)

YARNS E 2

MILL TEST PROCEDURES. PART 7. TESTS FOR BETTER YARN PRODUCTION. N. L. Enrick. Modern Textiles Mag. 38: 37-42, 59 (Jan. 1957). (522)

Descriptions and illustrative examples covering the following tests: (1) package size in roving, spinning, winding, spooling, and twisting, (2) speed tests, opening through weaving, (3) moisture and humidity control, opening through weaving, (4) evenness testing, sliver, roving, and yarn. Testing standards, frequency, and evaluation are included.

MILL TEST PROCEDURES. PART 8. YARN PREPARATION TESTS FOR BETTER WEAVING. N. L. Enrick. Modern Textiles Mag. 38: 39-40, 73-74 (Feb. 1957). (523)

Detailed test procedures covering: (1) purchased yarn quality, size, twist, strength, filament count, elongation, and variations, (2) filament yarn dye index, (3) winder tensions and slub catcher settings, (4) twist setting, (5) ply twist, (6) quilling frame check of overall condition, package measurement, bunch length, tensions, and maintenance, (7) twister package. Illustrative examples, testing forms, and evaluative standards are included.

NEW PRETENSIONER ON THE SCOTT IP-4 TESTER. J. W. Y. Heijnis. Enka Breda Rayon Rev. 10: 219-224 (Dec. 1956). (524)

Features, calibration, and use of the pretensioner are described. Photographs. Diagrams. 3 references.

TRACING DEFECTS WITH THE USTER EVENNESS TESTER. E. R. Beckner (Wennonah Cotton Mills). Textile Ind. 121: 139-141 (Feb. 1957). (525)

Method of analyzing Uster charts for determining the sources of unevenness of yarn, sliver, and roving is explained. Tables, including table of repeats for finisher drawing.

USTER SPECTROGRAPH AS A MILL TESTING TOOL. Uster Corp. Am. Textile Reptr. 71: 15, 17, 35 (Feb. 14, 1957). (526)

The spectrograph allows a correlation between yarn irregularities and fabric appearance, makes possible the tracing of what is causing a specific yarn irregularity, sets up a guide for the mill to improve its fiber control, and gives a permanent history of the sample, from raw stock to spun yarns.

YARN SLIVER UNEVENNESS: A SIMPLE APPROACH. N. H. Chandler (Thor Mills Ltd). Textile Merc. 136: 18-26 (Jan. 4, 1957); 67-70 (Jan. 11, 1957). (527)

A value K is developed, which represents the ratio of tested linear unevenness in the form of average range percent against the square root of the yarn count. Based on this ratio, short term variations, from process to process, are evaluated.

FABRICS E 3

ROUGHNESS OF FABRICS: SUBJECTIVE ASSESSMENT. H. C. W. Stockbridge and K. W. L. Kenchington. J. Textile Inst. 48: T26-T34 (Jan. 1957). (528)

A statistical analysis of the degrees of consistency and unanimity among subjects judging the comparative roughness of fabrics by touch showed a statistically significant agreement for the order of ranking of roughness of the fabrics. Photomicrographs. 9 references.

FABRIC STIFFNESS AND CREASE RECOVERY TESTING. Shirley Developments Ltd. Dyer 117: 149, 151 (Jan. 18, 1957). (529)

Features of and test procedures for the Shirley stiffness tester and Shirley crease recovery tester are outlined. Photographs.

METHOD OF TEST FOR THE DETERMINATION OF RESIN FINISH IN TEXTILE MATERIALS TREATED WITH UREA-FORMALDEHYDE. J. Textile Inst. 47: P1029-P1030 (Dec. 1956). (530)

Tentative textile standard no. 41, 1956.

DETERMINATION OF RESIN CONTENT OF FABRICS TREATED WITH UREA-FORMALDEHYDE RESINS. J. Tankard (Brit. Rayon Res. Assoc.). J. Textile Inst. 47: P1031-P1034 (Dec. 1956). (531)

Five well-known methods for determining resin content are compared with regard to reproducibility and accuracy of results.

OTHER E 4

COLOR MEASUREMENT IN TEXTILE INDUSTRY. W. Harrison. Textile Wkly. 56: 194-198 (July 20, 1956); 257 (July 27, 1956). (532)

Features and use of the author's photoelectric colorimeter.

IDENTIFICATION OF SIZINGS ON FABRICS WOVEN FROM SYNTHETIC FILAMENT YARN. C. R. Trommer. Textile Research J. 27: 66-72 (Jan. 1957). (533)

A rapid qualitative test method for the identification of sizings currently being used on fabrics woven from synthetic filament yarn is described. Mixtures of sizings have not been encountered, and no tests have been developed to determine components of mixtures. 10 references.

MEASURING AND CONTROLLING MOISTURE. G. Schellenberger. Textil-Praxis 11, No. 5: 480-483; No. 6: 585-588 (1956). In German. (534)

Methods for measuring moisture content are reviewed, as well as the regulation of moisture content of fabric while drying. Electronic moisture-controlling devices and their characteristics are described.

SEPARATION OF SOME DISPERSE DYES BY PAPER CHROMATOGRAPHY. K. Elliott and L. A. Telesz (Hosiery & Allied Trades Res. Assoc.). J. Soc. Dyers Colourists 73: 8-11 (Jan. 1957). (535)

A method is described for the qualitative analysis of some disperse dyes by paper chromatography. Photographs. Diagrams. 4 references.

WATER-SOLUBLE SOIL REMOVAL IN DRYCLEANING: DETERMINATION. G. P. Fulton and others (Nat. Inst. Dry Cleaning). ASTM Bull. No. 219: 50-54 (Jan. 1957). (536)

In an attempt to correlate removal of various food stains from fabrics during drycleaning with removal of a number of artificial soils, it was found that a sodium chloride-rayon swatch was suitable for measuring removal of water-soluble soil in drycleaning systems using Stoddard solvent when the relative vapor pressure of water was in the range of 0.70 to 0.75. 5 references.

INDUSTRIAL ENGINEERING F

MANAGEMENT ACCOUNTING. H. Dugdale. Dyer 116: 31-34 (July 6, 1956); 113-116 (July 20, 1956); 191-194 (Aug. 3, 1956); 263-265 (Aug. 17, 1956); 342-345 (Aug. 31, 1956); 427-430 (Sept. 14, 1956); 509-511 (Sept. 28, 1956). (537)

This British series discusses the significant functions of management accounting and how these are employed to supply industrial managements with a variety of essential data. The following subjects are examined: measuring direct labor costs, planned materials purchasing, overhead costs need continuous checking, standard cost schedules, adopting short-term budgets, integrating cost and financial accounts.

HEAT BALANCE STUDIES IN TEXTILE PLANTS. P. O. Lewin. Am. Textile Reptr. 70: 12-14, 41 (Dec. 6, 1956). (538)

Method of making a heat balance study to establish the over-all consumption of steam from its source, either the boilers or at the extraction point of a turbine, and to determine the efficiency of the heat exchanger being supplied with the steam. Diagrams.

MACHINERY AND MAINTENANCE F 1

MODERN PRINT CLOTH MILL, 1956: A SURVEY. PART 1. Whitin Rev. 23: 9-19 (Dec. 1956). (539)

Detailed analysis of what can be done with modern machinery in a well run mill, making 80 x 80 39 in. 4.00 yd. print cloth. The detailed data given can be easily adapted for mills manufacturing other fabrics from yarns in approximately the same range of counts. Mills can compare their present costs, process by process, with the costs shown in the survey to determine which processes are in greatest need of new machinery.

MATERIALS HANDLING MANUAL. V.1. BASIC PRINCIPLES OF HANDLING. Modern Materials Handling. Materials Handling Laboratories, Inc., 795 Boylston St., Boston 16, Mass., 1955. 256 p. (540)

This volume covers the basic principles of materials handling, such as plant layout, storage, packaging, shape factors, shipping, and receiving. Statistical methods of analysis of materials handling problems

are included, demonstrating the use of work sampling, optimization curves, flow charting, and amortization and replacement evaluation.

WEAR FUNDAMENTALS. Lubrication 42: 149-160 (Dec. 1956). (541)

A review of basic knowledge of the fundamentals of friction and wear and its application to the understanding of problems in lubrication, particularly of metal surfaces and liquid lubricants. Graphs. Tables. 47 references.

MONTE CARLO METHODS AND INDUSTRIAL PROBLEMS. W. N. Jessop (Courtaulds Ltd). Appl. Statistics 5: 158-165 (Nov. 1956). (542)

Examples of applications to machine failure and servicing problems. 5 references.

MULTI-MACHINE ATTENDANCE AND TEAM OPERATION. H. Köb. Textil-Praxis 11, No. 7: 675-684 (1956). In German. Through BCIRA 36: 575 (1956). (543)

This investigation was designed by the author for a time-and-motion study group as a preliminary introduction to the problem of multi-machine attendance and team-work on one machine. The technical and economic relationships are represented in simplified form and general examples are given.

COST FACTORS INVOLVED IN THE REPLACEMENT OF OBSOLETE MACHINERY. R. Lux. Whitin Rev. 23: 3-8 (Dec. 1956). (544)

The major economic problems deserving attention by any mill contemplating a modernization program, including investment, return, interest, taxes, insurance, depreciation, power, and floor space requirements, are briefly surveyed.

AUTOMATION: APPLICATION IN THE TEXTILE INDUSTRY. J. Waddington (Ashton Bros. & Co. Ltd). Textile Wkly. 56: 1495-1498 (Nov. 23, 1956). (545)

Modern applications to textile machinery, with examples, are listed.

CLEANING VISCOSE SPINNING NOZZLES BY MEANS OF ULTRASONICS. A. W. Cronshaw (Brit. Rayon Res. Assoc.). J. Textile Inst. 47: P1015-P1018 (Dec. 1956). (546)

QUALITY CONTROL F 3

QUALITY CONTROL OF JUTE GOODS. S. B. Bandyopadhyay. Indian Textile J. 67: 109-115 (Nov. 1956). (547)

The applicability of statistical quality control methods to jute processing is discussed, and a quality control scheme is presented. 5 references.

TABLES SHOWING HOW MUCH QUALITY CONTROL TESTING TO DO. N. L. Enrick. Institute of Textile Technology, Charlottesville, Va., 1956. 21 p. ITT report no. 13. (548)

Presents ready-made tables for determining the proper amount of quality control testing by the following categories: (1) variables, such as size and strength, moisture regain, etc., which are expressed along a scale of measurements, and (2) ends-down and loom-stop determinations. The development of these tables is discussed in terms of the essential processing and sampling factors involved: (1) processing variation, expressed in variation coefficient, (2) allowable tolerance, and (3) acceptable sampling risk. Examples are given. 7 references.

SCIENCES G

CHEMISTRY G 1

FIBRES, PLASTICS, AND RUBBERS: A HANDBOOK OF COMMON POLYMERS. W. J. Roff (Brit. Cotton Industry Res. Assoc.). Academic Press Inc., 111 Fifth Ave., New York 3, N. Y., 1956. 400 p. $10.00. (549)

This book contains extensive chemical, physical, and general information on common high polymers. It is arranged for ready reference and is intended essentially for those engaged in industrial research and development. The items listed derive from assessment of the data in the literature, from unpublished work communicated privately, and from original measurements made at the Shirley Institute.

MOISTURE RELATIONS OF CELLULOSE. PART 3. SORPTION HYSTERESIS AND THE EFFECT OF TEMPERATURE. M. Wahba and S. Nashed (Univ. of Cairo). J. Textile Inst. 48: T1-T20 (Jan. 1957). (550)

Sorption cycles from dryness to saturation were obtained with water vapor on a nominally pure cellulose at 20° C, 30° C and 40° C, in order to examine the effect of temperature on the extent of hysteresis and to compare isosteric heats of sorption with calorimetric values obtained previously. Isosteric evaluation of the heats of sorption indicates that the sorbing surface of cellulose, at a given moisture content, increases above a certain optimum temperature, between 30° C and 40° C, probably owing to the weakening of some semi-crystalline inter-chain linkages. Diagrams. Graphs. 30 references.

SYMPOSIUM ON pH MEASUREMENT. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa., 1956. 101 p. $2.50. (551)

LACTAMS: INDUSTRIAL APPLICATIONS. E. G. Curphey. Textile J. Australia 31: 1143-1146 (Nov. 20, 1956). (552)

Patent survey covering the preparation of lactams and their application in the manufacture of fibers, plastics, and coating compositions. 16 references.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

CORRUGATED ROLL FOR THE PROCESSING OF TOW. G. Downing (to Am. Viscose Corp.). USP 2 773 588, Dec. 11, 1956. (553)

ELECTRICAL THREAD BREAKAGE OR SLUBBING DETECTOR. E. Breuning (Germany). USP 2 774 061, Dec. 11, 1956. (554)

Electrical detector system for materials of low electrical conductivity, e.g., textiles, which does not require extremely high voltages and careful insulation of a grounded electrode.

THREAD REMOVAL FROM TEXTILE MILL WASTE PREPARATORY TO FURTHER PROCESSING OF THE WASTE. C. S. Allen, Jr. USP 2 774 111, Dec. 18, 1956. (555)

YARN TENSION DEVICE. A. F. Pieper. USP 2 774 550, Dec. 18, 1956. (556)

Yarn tension device, in which a pair of removable guide arms of refractory material are mounted in a rotatable holder to vary the tension exerted on the yarn traveling between and over the guide arms.

YARN TENSION DEVICE. A. F. Pieper. USP 2 774 551, Dec. 18, 1956. (557)

Spiral spring for mounting the fixed comb in a tension device involving a relatively fixed and a relatively movable comb member, between which the yarn travels.

ROTARY SELF-SHARPENING STAPLE CUTTER. K. H. Anthony (to Industrial Rayon Corp.). USP 2 776 005, Jan. 1, 1957. (558)

YARN BREAKAGE DETECTOR. E. Vossen (to Stop-Motion Devices Corp.). USP 2 777 026, Jan. 8, 1957. (559)

Detector blade, 0.005 in. thick, counterbalanced to operate a stop-motion mechanism when a monitored yarn breaks.

CUTTING CONTINUOUS FILAMENTS INTO SHORT LENGTHS. R. H. Speakman (to Imp. Chem. Ind. Ltd). USP 2 777 519, Jan. 15, 1957. (560)

TOW OPENING AND SPREADING DEVICE. J. Doleman (to Brit. Rayon Research Assoc. and T. M. M. (Research) Ltd). USP 2 778 065, Jan. 22, 1957. (561)

OPENING, PICKING, FIBER PREPARATION B 1

APPLICATOR. W. A. Beardsell, W. M. Davis and R. S. Hood (to Monsanto Chemical Co.). USP 2 775 792, Jan. 1, 1957. (562)

Apparatus for applying conditioning liquids, by centrifugal means, to a partially condensed carded web, preferably after it leaves the calender rolls following a modified trumpet.

CARDING AND COMBING B 2

DOFFER COMB FOR CARDING MACHINES. W. W. Wright and G. P. Robinson, Jr. USP 2 772 446, Dec. 4, 1956. (563)

Arrangement for mounting and oscillating, reciprocating, or vibrating the doffer comb at half the frequency of the applied electrical power.

CARD DRIVE. J. O. Jeffery. USP 2 772 579, Dec. 4, 1956. (564)

Gearing assembly for connecting a power source to the cylinder of a carding machine.

CARD STRIPPER. H. Hopkinson (to Carding Specialists (Canada) Ltd). USP 2 774 112, Dec. 18, 1956. (565)

Apparatus for upward stripping of carded web from surface of lower pressure roller.

HYDRAULIC GILL-BOX MECHANISM. J. M. B. Gonay (Belgium). USP 2 774 114, Dec. 18, 1956. (566)

HOOD FOR REMOVING FLY IN A CARDING ROOM. A. F. Hayes. USP 2 774 994, Dec. 25, 1956. (567)

DRAWING AND ROVING B 3

TEXTILE COT. J. Rockoff (to Dayton Rubber Co.). USP 2 773 288, Dec. 11, 1956. (568)

Textile roll cover or cot which eliminates eyebrowing and lapping-up of fibers. Polyvinyl alcohol is incorporated in the oil-resistant synthetic rubber material of which the cot is made.

TOP DRAFTING ROLL. L. M. Cotchett. USP 2 775 793, Jan. 1, 1957. (569)

Plastic shell type top roll, supported on the axle by bearing surfaces made of materials requiring little or no lubrication, e.g. nylon or Teflon.

DRAWING MACHINERY. A. Kruse (Germany). USP 2 775 858, Jan. 1, 1957. (570)

A method for the drawing of slivers consists of drawing 2 webs simultaneously through a drawing frame and compressing into 2 parallel, side-by-side slivers. False left and right twists are given to each of these slivers, staggering the points of transition between the left and right twists of each, and the slivers are then compressed into a twin sliver. Sliver friction is reduced and uniformity is improved.

DRAFTING APPARATUS TENSOR ARM. J. Noguera (to Casablancas High Draft Co. Ltd). USP 2 777 168, Jan. 15, 1957. (571)

WEIGHTING MECHANISM FOR DRAFTING ROLLS. J. Noguera (to Casablancas High Draft Co. Ltd). USP 2 777 169, Jan. 15, 1957. (572)

Methods for releasing the weight on the front top rollers of drafting mechanisms, enabling these rollers to be removed, while maintaining weight on the remaining rollers.

TOP DRAFTING ROLL SHAFT. J. Walmsley (to Morgan Crucible Co. Ltd). USP 2 778 066, Jan. 22, 1957. (573)

Shaft for top rolls which contains a sintered metal bush in an annular recess for convenience in oiling.

SPINNING, WINDING, TWISTING B 4

SPINNING MACHINE RINGS. N. Kobayashi (Japan). USP 2 772 535, Dec. 4, 1956. (574)

The ring, having no outside flange, prevents damage and loss of travelers, and facilitates the quick replacement of a traveler.

HIGH-SPEED VERTICAL TWISTING MACHINE. C. F. van Hook. USP 2 773 344, Dec. 11, 1956. (575)

The invention is concerned with the flyer, cradle construction, and drive connections.

RING SPINNING MACHINE. W. W. Leutert (to Brematex). USP 2 773 345, Dec. 11, 1956. (576)

Ring spinning machine in which the presence of annular balloon limiters does not interfere with the removal of the cops.

TOP DRIVE SPINDLE. R. L. Childs and E. Cranshaw (to Draper Corp.). USP 2 773 346, Dec. 11, 1956. (577)

A spindle of fairly conventional design has been modified for easy donning and doffing and effective driving.

CHEESE WINDING MACHINE FOR SYNTHETIC FILAMENTS DELIVERED AT A CONSTANT RATE. G. Severini (Italy). USP 2 773 652, Dec. 11, 1956. (578)

TOP DRAFTING ROLL SUPPORT. B. Johanson (to SKF Kugellagerfabriken). USP 2 774 113, Dec. 18, 1956. (579)

Top roll support, which permits the top roll to rest by gravity on the bottom roll and to be driven by it, so that the top roll is automatically aligned with the bottom roll.

BOBBIN HOLDER. R. Rulon-Miller and W. H. Tabor (to Dixon Corp.). USP 2 774 549, Dec. 18, 1956. (580)

Pendant type bobbin holders in which the bearing is completely housed within the bobbin, so that it is protected from lint.

HIGH REDUCTION DRAFTING. O. E. Sandelin (to Warner & Swasey Co.). USP 2 774 995, Dec. 25, 1956. (581)

Sliver (or roving) control system for subjecting the fibers of a sliver being drafted to the joint effect of suction and condensation or compression along part of the drafting ratch in advance of the drafting rolls.

BOBBIN TRANSFER TAIL HOLDER AND CUTTER. L. R. Graybeal and D. J. Edgar (to North Am. Rayon Corp.). USP 2 775 091, Dec. 25, 1956. (582)

COMPOSITE METAL BLADE AND WHORL UNIT SPINDLE FOR PAPER TUBE TYPE BOBBINS. J. D. Gleitz (to Curtiss-Wright Corp.). USP 2 775 859, Jan. 1, 1957. (583)

SPINDLE FOR FALSE TWISTING MACHINE. N. E. Klein (to Deering Milliken Research Corp.). USP 2 777 276, Jan. 15, 1957. (584)

Spindle by means of which false twist may be continuously inserted and removed in a moving strand of yarn without producing broken filaments, stripped-back filaments, etc.

ASSEMBLING BEARINGS FOR SPINNING OR TWISTING SPINDLES. K. Beerli (to Spindel-, Motoren- und Maschinenfabrik AG). USP 2 777 739, Jan. 15, 1957. (585)

YARNS B 5

WRAPPING MATERIAL FOR YARN PACKAGES. R. H. Pestell (to E. I. du Pont de Nemours & Co.). USP 2 772 773, Dec. 4, 1956. (586)

Wrapping for yarn cakes consisting of a knit fabric ribbed with staple yarn, so as to interlock overlapping portions of the wrap firmly in place.

UNTWISTED YARN FORMATION. L. M. Cotchett. USP 2 773 297, Dec. 11, 1956. (587)

Continuous method of producing an untwisted yarn from a carded web of fibers by impregnating the web with a thermoplastic adhesive, condensing into a strand, and drawing while the thermoplastic material is softened by heat. The yarns may be woven into fabrics and the thermoplastic removed (if desired) by suitable solvents.

STRETCH YARN AND FABRIC. M. H. Comer (to Alamance Industries). USP 2 777 310, Jan. 15, 1957. (588)

Stretchable knit fabric made from a composite yarn of cotton strands curled or twisted around stretchable strands of nylon. The yarn has the appearance and feel of cotton and the stretch of nylon.

FABRIC PRODUCTION C

BRAIDING MACHINE STOP MOTION. B. Hutnick. USP 2 774 274, Dec. 18, 1956. (589)

WARPING, SLASHING, YARN PREPARATION C 1

CRIMPED SUPERPOLYAMIDE YARNS. P. Charlois (to Vaucanson Silk Mills). USP 2 777 277, Jan. 15, 1957. (590)

Producing a high twist superpolyamide crepe yarn by sizing a low twist yarn, drying, imparting a high twist, kiln drying, steaming, cooling, and further sizing to fix the high twist.

CRIMPING NYLON YARN. A. A. Hasler (to Duplan Corp.). USP 2 778 090, Jan. 22, 1957. (591)

Nylon yarn is crimped by sizing, twisting, steam-setting, traverse-winding the yarn on a small-diameter tube capable of being softened by steam, placing a non-shrinkable core within the tube to limit the amount of tube and yarn shrinkage, and steaming.

WEAVING C 2

SELVAGE FORMATION IN SHUTTLELESS LOOMS. R. Dewas (France). USP 2 772 697, Dec. 4, 1956. (592)

ACTUATING MECHANISM FOR VERDOL JACQUARDS. O. Dalle (to Soc. des Mecaniques Verdol). USP 2 773 515, Dec. 11, 1956. (593)

LOOM HARNESS F. H. Kaufmann (to Steel Heddle Mfg. Co.). USP 2 773 516, Dec. 11, 1956. (594)

Securing screw hooks and eyes, used in loom harness frames, to prevent them from turning improperly to incorrect positions.

HYDRAULIC PICKING MECHANISM. L. J. Hooper and C. R. Kronoff (to Crompton & Knowles Loom Works). USP 2 773 517, Dec. 11, 1956. (595)

PROFILE ELEMENT FOR HARNESS FRAMES. P. Formenti (Italy). USP 2 774 386, Dec. 18, 1956. (596)

Profiled metal element manufactured from a single sheet metal piece for harness frames.

PLASTIC SLIDE HOOKS FOR HEDDLE FRAMES. A. S. Galaher and J. T. Trenholm (to Emmons Loom Harness Co.). USP 2 774 387, Dec. 18, 1956. (597)

SHUTTLE CONTROL. H. C. Frentzel. USP 2 774 388, Dec. 18, 1956. (598)

Shuttle control mechanism for wire weaving looms to eliminate frequent shut-down of the loom for replenishing the weft supply. Weft may be supplied in large quantities to the sides of the loom and the woven cloth will have a uniform texture. A low-inertia shuttle picks up weft threads from the two weft supplies. The pirn is eliminated.

TEXTURED PILE CARPET. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 774 389, Dec. 18, 1956. (599)

Textured effects are achieved in pile carpets by interweaving two or more pile warps, employing a succession of different wires to produce different pile

configurations varying between high and low pile, wavy and straight pile, cut and uncut pile, etc.

FLOAT PILE CARPETS. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 774 390, Dec. 18, 1956. (600)

High, uncut pile loops in cut pile areas of a carpet are produced by creating low floats beneath wires, in a relatively low cut pile area, which will rise above the cut pile when the wires are withdrawn.

SELECTOR MECHANISM FOR JACQUARD CARD PUNCHING MACHINE. F. B. Ware (to Tartan Knitting Mills). USP 2 774 428, Dec. 18, 1956. (601)

TENSION-RESPONSIVE CONTROL FOR LOOM LET-OFF DRIVE. D. B. Rush (to Reliance Electric & Engineering Co.). USP 2 775 263, Dec. 25, 1956. (602)

PICKER STICK CHECK. J. Rockoff (to Dayton Rubber Co.). USP 2 775 264, Dec. 25, 1956. (603)

A loom check strap of laminated rubber and nylon fabric has outer layers of a nylon-containing fabric, a central layer of longitudinally arranged nylon-containing reinforcing cords, and a thin coating of fused nylon about the edges.

COMBINATION LOOM LAY AND REED FRAME. C. E. Schmidt. USP 2 775 985, Jan. 1, 1957. (604)

Apparatus for mounting a reed frame in the lay of a loom, a specially constructed reed frame, and a method of imparting tension to the dent wires of the reed frame.

NARROW FABRIC LOOM. J. C. Hochman. USP 2 776 675, Jan. 8, 1957. (605)

High-speed narrow fabric loom in which the needle, the reed, and the heddle plates are as close to the fell of the woven strip as possible, so as to get high speed with a minimum of shock and vibration.

PICKER BUFFER. D. M. Rager. USP 2 776 676, Jan. 8, 1957. (606)

PREVENTING CREASES IN FABRICS AS TAKEN UP IN LOOMS. E. W. Paquette (to Draper Corp.). USP 2 776 677, Jan. 8, 1957. (607)

Crease formation in fabrics, as they pass through the take-up and wind-up mechanism in looms, is prevented by means of a roller between the fabric and take-up roll, with its motion opposite to that of the fabric.

AUTOMATIC FRICTION BRAKE TENSION CONTROL FOR WARP BEAMS. R. M. Taylor. USP 2 777 469, Jan. 15, 1957. (608)

SHUTTLELESS RIBBON LOOM WITH RECIPROCATING NEEDLE. G. Vallaguzza (Italy). USP 2 777 470, Jan. 15, 1957. (609)

ONE PIECE GRIPPER SHUTTLE. G. N. Peterson (to Crompton & Knowles Loom Works). USP 2 777 471, Jan. 15, 1957. (610)

SHUTTLE PICKING MECHANISM. E. Pfarrwaller (to Sulzer Freres SA). USP 2 777 472, Jan. 15, 1957. (611)

Shuttle picking mechanism including a picking lever, removably connected with a power accumulator, which drives the shuttle by accumulated power after release of a locking device.

AUXILIARY PATTERN CHAIN ATTACHMENT FOR VARYING THE ACTUATION OF THE LOOM HARNESS. C. E. McVety (to Orr Felt & Blanket Co.). USP 2 778 380, Jan. 22, 1957. (612)

SHUTTLE. F. Y. Collins (to Draper Corp.). USP 2 778 381, Jan. 22, 1957. (613)

Means for adjustably restraining the bobbin-holding spring in the shuttle.

KNITTING C 3

AUTOMATIC STITCH LENGTH CONTROL MECHANISM FOR CIRCULAR HOSIERY MACHINES. V. T. Stack (to Wilkes Hosiery Mills Co.). USP Reissue 24 239, Nov. 20, 1956. Original No. 2 685 786, Aug. 10, 1954. (614)

STOP MOTION FOR WARP KNITTING MACHINE. S. V. Haas, Jr. (to Beaunit Mills). USP 2 772 551, Dec. 4, 1956. (615)

APPLIQUE KNIT FABRICS. D. P. Moore. USP 2 773 371, Dec. 11, 1956. (616)

Latch or spring needle rotating cylinder knitting machines, in combination with a fiber feeding machine under jacquard control, so that fibers are fed only to selected needles to produce applique designs upon the knitted base fabric during knitting.

CLAMPING AND CUTTING MEANS FOR CIRCULAR KNITTING MACHINE. S. R. Shelmire (to Scott & Williams, Inc.). USP 2 773 372, Dec. 11, 1956. (617)

SILK STOCKINGS. H. Kakizaki (Japan). USP 2 774 232, Dec. 18, 1956. (618)

Silk stockings with durability equal to nylon stockings are produced by knitting the leg part from raw silk, treated to fix the sericin, and the welt, heel, sole, and toe parts from degummed silk.

KNIT TERRY FABRIC. V. Lombardi. USP 2 774 233, Dec. 18, 1956. (619)

DIAL RACKING MECHANISM. C. W. Minton and J. G. O'Hara (to May Hosiery Mills). USP 2 775 106, Dec. 25, 1956. (620)

For transfer type machine for knitting a complete sock with a ribbed top, plain or ribbed knit leg and foot, and a pull top separating adjacent socks.

CIRCULAR RIB KNITTING MACHINE CAM SYSTEM. A. Shortland (to Mellor Bromley & Co. Ltd). USP 2 775 107, Dec. 25, 1956. (621)

Improved adjustable stitch cams in the cam system associated with a needle bed in a circular knitting machine of the independent latch needle type.

KNITTING MACHINE NEEDLE DEVICE. E. Bellini (to Vanity Fair Mills). USP 2 775 108, Dec. 25, 1956. (622)

Complementary pair of separate (hook and tongue) loop forming needle elements for knitting.

SAFETY YARN CARRIER TUBE FOR FULL-FASHIONED KNITTING MACHINES. F. Scarborough. USP 2 775 109, Dec. 25, 1956. (623)

KNITTING MACHINE STOP-MOTION. J. E. Lynam (to Wm. Cotton Ltd). USP 2 775 110, Dec. 25, 1956. (624)

Stop motion device, for knitting machines using a pattern chain equipped with pattern studs, which, when activated by a misplaced part associated with the chain, stops the chain or makes one or more of the feelers inoperative.

CHANGING KNITTING PATTERNS. M. Philip. USP 2 775 880, Jan. 1, 1957. (625)

Method and apparatus for changing the knitting pattern of a multifeed knitting machine from plain knitting to rib knitting, or the reverse, without changing the operating speed of the machine.

GUIDE BAR FOR KNITTING MACHINES. J. Held (to Textile Machine Works). USP 2 775 881, Jan. 1, 1957. (626)

High-speed tricot machine, with a multiple flat blade type spring connected to the yarn guide bar to resiliently tension the guide bar during shogging movements, in response to the pattern mechanism.

DEVICE FOR DRESSING BEARDED NEEDLES FOR KNITTING MACHINES. K. Meier (to Machine Tool Works Oerlikon). USP 2 776 696, Jan. 8, 1957. (627)

FULL FASHIONED HOSIERY MACHINE. C. G. Newton. USP 2 777 309, Jan. 15, 1957. (628)

Yarn tension device synchronized with the knitting of the stocking selvage edge.

SEMI-INTARSIA KNITTED FABRIC. V. Lombardi. USP 2 777 311, Jan. 15, 1957. (629)

SLIDING TONGUE KNITTING MACHINE NEEDLE. D. W. Rhoads (to Nanco, Inc.). USP 2 778 211, Jan. 22, 1957. (630)

FABRICS C 4

REVERSIBLE WOVEN FLAT FABRICS. W. A. Linehan, Jr. (to Ralco Fabric). USP 2 772 698, Dec. 4, 1956. (631)

Reversible woven flat fabric, in which a design (for example, a written legend) appears on each face of the fabric at any desired location, without appearing in reverse on the opposite face.

LENO-WOVEN FABRICS. T. M. Scruggs (to Bemis Bros. Bag Co.). USP 2 772 699, Dec. 4, 1956. (632)

Leno-woven open-mesh fabrics, used for making open-mesh bags, with a warpwise reference line for indicating the amount of material to be incorporated in a bag seam and for facilitating rapid inspection of finished bags.

NONWOVEN POROUS SYNTHETIC LEATHER. J. A. Piccard and B. Graham (to E. I. du Pont de Nemours & Co.). USP 2 773 286, Dec. 11, 1956. (633)

A porous synthetic leather is made by forming a continuous sheet by hot pressing a composition of a structural fiber (e.g. cotton, wool, rayon, nylon), an extractable pore-forming fiber (e.g. cellulose acetate or polyvinyl alcohol), and a binder, and forming interconnecting pores by extracting the pore-forming fibers with a solvent.

FABRIC BODY ARMOR. C. P. MacIver. USP 2 773 791, Dec. 11, 1956. (634)

A flexible, armored garment is made by resin spot-

laminating layers of woven, high tenacity, elongatable material, so that the spot laminations are located between alternate plies, transversely aligned to stagger the respective spaced rows in depth.

RUBBER-FABRIC LAMINATES. W. B. Reynolds (to Phillips Petroleum Co.). USP 2 773 795, Dec. 11, 1956. (635)

A bonding agent for rubber-fabric laminates composed of an aqueous solution of a copolymer of a conjugated diene with a vinyl heterocyclic nitrogen base.

COTTON FELTED NONWOVEN FABRICS. H. A. Secrist (to Kendall Co.). USP 2 774 126, 128, Dec. 18, 1956. (636)

Soft, porous, extensible felt-like sheet material of cotton fibers and fusible synthetic fibers, which are frictionally entangled and interlocked with each other by artificially induced kinks, bends, twists, and curls, when treated with cellulose swelling agents (such as sodium hydroxide) to permit shrinkage.

NONWOVEN FABRICS. C. L. Nottebohm, W. Jacob, W. Lauppe and R. Schabert. USP 2 774 687, Dec. 18, 1956. (637)

Nonwoven fabrics are prepared by impregnating fiber fleeces with dispersions of natural and/or synthetic rubber and resin precondensates or vulcanizing agents, and solidifying the impregnated material by drying or treatment with precipitating agents, vulcanizing, or hardening.

FUR OR GLASS HAT BAT FORMING APPARATUS. F. R. Marindin (to Doran Bros.). USP 2 777 170, Jan. 15, 1957. (638)

PILE CARPETS. R. J. Jackson (to Bigelow-Sanford Carpet Co.). USP 2 777 468, Jan. 15, 1957. (639)

Methods of weaving pile carpets on wire looms to produce high and low pile loops and cut tufts in any desired pattern.

PILE CARPET. P. J. Austin (to Firth Carpet Co.). USP 2 777 475, Jan. 15, 1957. (640)

Formation of a relief pattern in pile carpets on a Wilton type loom by changing the crank shaft-cam shaft ratio and using a jacquard mechanism for lifting selected pile yarn over the pile wires.

FELT. L. D. Bragg, Jr. (to General Tire & Rubber Co.). USP 2 777 787, 788, Jan. 15, 1957. (641)

Felt sheeting of layers of nylon and wool fibers compacted to form a web with uniform stretch in all directions, to be used as a backing for calendered flexible vinyl sheeting.

FINISHING AND CHEMICAL PROCESSING D

METHOD OF PRODUCING A PILE FABRIC OF CELLULOSE ACETATE. R. J. Brown and J. Downing (to Brit. Celanese Ltd). USP 2 776 223, Jan. 1, 1957. (642)

Pile fabric prepared by adhesively bonding staple fibers of cellulose acetate to a cellulose base fabric by electrostatic means, and heating to effect cross-linking of the adhesive.

CHEMICAL PROCESSES D 1

FABRIC ARTICLE TREATING APPARATUS. S. P. Parker (to Callaway Mills Co.). USP 2 772 657, Dec. 4, 1956. (643)

Liquid treating apparatus for rapidly spraying fabric articles, in continuous succession, and recovering a large proportion of the liquid. An example of its use is applying oil to dust cloths.

SHRINKPROOFING APPARATUS. D. C. Glassford and F. R. Redman (to Proctor & Schwartz, Inc.). USP 2 773 295, Dec. 11, 1956. (644)

Apparatus for steaming and working fabrics to minimize shrinkage and to stabilize residual shrinkage in length and width.

FELT SATURANTS. L. V. Hassel and J. A. Parker (to Armstrong Cork Co.). USP 2 773 782, Dec. 11, 1956. (645)

Heat-convertible alkyd resins of malenized tall oil fatty acids are used as saturants for waterproofing and strengthening backing felt for resilient hard surface floor coverings.

WATERPROOFING. L. Orthner and M. Reuter (to Farbwerke Hoechst AG). USP 2 774 689, Dec. 18, 1956. (646)

Process for waterproofing fabrics by treatment with a solution, in an organic solvent, of a mixture of zirconium alcoholate and a carboxylic or sulfinic acid.

WATERPROOFING. S. R. Cockett, J. G. Evans and G. Landells (to Bradford Dyers' Assoc. Ltd). USP 2 774 690, Dec. 18, 1956. (647)

Water repellent treatment with methylhydrogenpolysiloxane and a titanium compound.

SHRINK AND CREASE RESISTANT FABRICS. C. W. Schroeder and R. W. Sumers (to Shell Development Co.). USP 2 774 691, Dec. 18, 1956. (648)

Treating textiles for crease and shrink resistance by impregnating with an aqueous solution of a mixture of a polyepoxide and a polyaldehyde, and an acid-acting curing catalyst, and heating to a high temperature for a short period.